Nos. 591 & 605

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IN THE

United States Court of Appeals

FOR THE FIFTH CIRCUIT

No. 18,547

TENNESSEE GAS TRANSMISSION COMPANY

v.

FEDERAL POWER COMMISSION

No. 18,597

THE MANUFACTURERS LIGHT AND HEAT COMPANY, ET AL.

v.

FEDERAL POWER COMMISSION

On Petition to Review Orders of the Federal Power Commission

JOINT APPENDIX

Volume II

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IN THE

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FOR THE FIFTH CIRCUIT

No. 18,547

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v.

FEDERAL POWER COMMISSION

No. 18,597

THE MANUFACTURERS LIGHT AND HEAT COMPANY, ET AL.

v.

FEDERAL POWER COMMISSION

On Petition to Review Orders of the Federal Power Commission

JOINT APPENDIX

Volume II

(1818)

Hearing Exhibit No. 4-A

1818

Docket No. G-19983
Exhibit 4-A
Schedule A
Witness: Walser

TENNESSEE GAS TRANSMISSION COMPANY
RATE BASE AND RETURN (REVISED)
TWELVE MONTHS ENDED JULY 31, 1959

Line No.	Column 1 Particulars	(2) Reference	(3) Amount
1	Average net gas plant	Exhibit ___ (D), Schedule B	$838,307,235
2	Net working capital	Exhibit ___ (D), Schedule C	12,323,509
3	Total rate base		$850,630,744
4	Return at 7%		$ 59,544,152
5	NOTE: This schedule supersedes Schedule A of Exhibit 4.		

FEDERAL POWER COMMISSION
Docket No. G-19983
Hearing Ex. No. 4-A
Date Identified APR 6 1960
Date Admitted MAY 2 5 1960

TENNESSEE GAS TRANSMISSION COMPANY
MOODY'S AVERAGE OF YIELDS ON PUBLIC UTILITY BONDS
RATING Aaa

Line No	Column 1 Year	(2) January	(3) February	(4) March	(5) April	(6) May	(7) June	(8) July	(9) August	(10) September	(11) October	(12) November	(13) December	(14) Average
1	1920	6.13%	6.22%	6.22%	6.35%	6.53%	6.79%	6.77%	6.82%	6.72%	6.90%	6.53%	6.78%	6.53%
2	1921	6.68	6.58	6.54	6.49	6.56	6.59	6.56	6.35	6.24	5.99	5.81	5.72	6.34
3	1922	5.59	5.49	5.37	5.30	5.23	5.14	5.15	5.09	5.03	5.01	5.19	5.11	5.23
4	1923	5.09	5.08	5.22	5.31	5.22	5.17	5.13	5.06	5.13	5.11	5.11	5.10	5.14
5	1924	5.09	5.04	5.03	5.05	5.00	4.95	4.91	4.88	4.89	4.85	4.90	4.89	4.96
6	1925	4.89	4.91	4.86	4.84	4.80	4.74	4.81	4.83	4.79	4.77	4.76	4.80	4.82
7	1926	4.78	4.70	4.73	4.66	4.64	4.67	4.68	4.69	4.72	4.74	4.70	4.69	4.70
8	1927	4.65	4.66	4.63	4.59	4.61	4.58	4.62	4.57	4.55	4.54	4.53	4.49	4.59
9	1928	4.47	4.47	4.43	4.42	4.45	4.53	4.56	4.59	4.54	4.55	4.53	4.56	4.51
10	1929	4.55	4.58	4.63	4.63	4.66	4.73	4.70	4.74	4.74	4.73	4.71	4.62	4.67
11	1930	4.62	4.66	4.60	4.58	4.58	4.54	4.49	4.43	4.37	4.36	4.38	4.43	4.50
12	1931	4.33	4.34	4.30	4.27	4.21	4.21	4.22	4.19	4.27	4.62	4.59	4.81	4.36
13	1932	4.92	5.00	4.68	4.70	4.71	4.83	4.76	4.57	4.39	4.32	4.30	4.18	4.61
14	1933	4.10	4.17	4.38	4.48	4.41	4.29	4.20	4.14	4.20	4.21	4.46	4.45	4.29
15	1934	4.25	4.10	4.03	3.97	3.93	3.85	3.81	3.83	3.87	3.82	3.78	3.74	3.92
16	1935	3.69	3.61	3.55	3.55	3.56	3.53	3.47	3.51	3.51	3.48	3.41	3.36	3.52
17	1936	3.30	3.26	3.28	3.26	3.23	3.21	3.19	3.20	3.18	3.16	3.13	3.07	3.21
18	1937	3.07	3.16	3.29	3.33	3.28	3.25	3.22	3.20	3.21	3.21	3.15	3.11	3.21
19	1938	3.10	3.09	3.08	3.10	3.03	3.02	3.01	3.01	3.02	2.98	2.94	2.92	3.03
20	1939	2.87	2.87	2.86	2.87	2.83	2.83	2.80	2.83	3.14	3.02	2.87	2.82	2.88
21	1940	2.81	2.80	2.76	2.75	2.82	2.85	2.78	2.79	2.74	2.74	2.72	2.72	2.77
22	1941	2.77	2 76	2.74	2.73	2.72	2.69	2.65	2.64	2.65	2.63	2.62	2.71	2.69
23	1942	2.74	2.77	2.79	2.75	2.75	2.74	2.72	2.72	2.71	2.71	2.69	2.71	2.73
24	1943	2.70	2.67	2.67	2.66	2.66	2.63	2.61	2.62	2.64	2.63	2.64	2.68	2.65
25	1944	2.67	2.66	2.65	2.64	2.64	2.63	2.62	2.63	2.65	2.66	2.68	2.66	2.65
26	1945	2.65	2.64	2.62	2.61	2.63	2.60	2.61	2.63	2.61	2.60	2.60	2.60	2.62
27	1946	2.51	2.44	2.44	2.45	2.49	2.48	2.48	2.50	2.55	2.58	2.58	2.60	2.51
28	1947	2.54	2.54	2.55	2.52	2.52	2.52	2.53	2.53	2.58	2.67	2.74	2.82	2.59
29	1948	2.82	2.82	2.81	2.75	2.74	2.75	2.82	2.87	2.85	2.85	2.85	2.81	2.81
30	1949	2.73	2.72	2.71	2.72	2.72	2.71	2.67	2.62	2.61	2.61	2.58	2.58	2.67
31	1950	2.56	2.56	2.57	2.59	2.61	2.62	2.64	2.61	2.65	2.66	2.66	2.67	2.62
32	1951	2.65	2.67	2.80	2.89	2.91	2.99	2.97	2.90	2.87	2.92	3.00	3.03	2.88
33	1952	3.01	2.96	2.99	2.96	2.96	2.97	3.00	3.00	3.00	3.04	3.00	2.99	2.99
34	1953	3.05	3.13	3.18	3.30	3.40	3.41	3.32	3.30	3.35	3.20	3.12	3.15	3.24
35	1954	3.07	2.96	2.87	2.87	2.90	2.92	2.92	2.90	2.94	2.92	2.92	2.93	2.93
36	1955	2.95	3.01	3.05	3.03	3.07	3.08	3.09	3.15	3.19	3.14	3.13	3.17	3.09
37	1956	3.14	3.10	3.11	3.23	3.30	3.29	3.30	3.44	3.58	3.63	3.72	3.79	3.39
38	1957	3.81	3.74	3.71	3.71	3.77	3.89	4.05	4.21	4.26	4.25	4.22	3.93	3.96
39	1958	3.68	3.62	3.67	3.66	3.63	3.64	3.74	3.94	4.17	4.25	4.22	4.19	3.87
40	1959	4.23	4.25	4.24	4.31	4.48	4.56	4.60	4.54	4.62	4.74	4.66	4.65	4.40

Docket No. G-19983
Exhibit 11
Schedule A
Witness: McGee
Page 2 of 4

(2211)

TENNESSEE GAS TRANSMISSION COMPANY
MOODY'S AVERAGE OF YIELDS ON PUBLIC UTILITY BONDS
RATING Aa

Line No.	Column 1 Year	(2) January	(3) February	(4) March	(5) April	(6) May	(7) June	(8) July	(9) August	(10) September	(11) October	(12) November	(13) December	(14) Average
1	1920	6.22%	6.32%	6.45%	6.54%	6.90%	6.88%	6.68%	6.92%	6.77%	6.59%	6.69%	6.86%	6.65%
2	1921	6.79	6.67	6.73	6.73	6.74	6.79	6.77	6.67	6.46	6.38	6.05	5.76	6.55
3	1922	5.76	5.70	5.65	5.53	5.45	5.51	5.46	5.30	5.22	5.34	5.46	5.41	5.48
4	1923	5.36	5.40	5.57	5.58	5.52	5.52	5.60	5.48	5.52	5.53	5.49	5.49	5.51
5	1924	5.43	5.40	5.42	5.42	5.35	5.28	5.24	5.23	5.25	5.21	5.20	5.17	5.30
6	1925	5.15	5.14	5.13	5.06	4.98	4.97	5.00	5.01	4.98	4.97	4.97	4.96	5.03
7	1926	4.91	4.91	4.91	4.88	4.86	4.85	4.89	4.88	4.90	4.89	4.86	4.83	4.88
8	1927	4.83	4.86	4.83	4.81	4.80	4.79	4.77	4.72	4.73	4.69	4.69	4.65	4.76
9	1928	4.61	4.59	4.57	4.57	4.60	4.70	4.71	4.78	4.77	4.75	4.72	4.75	4.68
10	1929	4.75	4.81	4.89	4.88	4.90	4.90	4.91	4.97	5.02	5.05	4.96	4.87	4.91
11	1930	4.89	4.93	4.83	4.79	4.77	4.76	4.73	4.87	4.62	4.63	4.68	4.74	4.75
12	1931	4.64	4.64	4.57	4.54	4.47	4.48	4.48	4.46	4.58	4.99	4.97	5.36	4.68
13	1932	5.54	5.69	5.36	5.52	5.63	5.72	5.70	5.27	4.99	4.86	4.84	4.75	5.32
14	1933	4.61	4.76	5.06	5.25	5.15	4.93	4.75	4.73	4.97	5.04	5.47	5.47	5.02
15	1934	5.29	4.88	4.73	4.66	4.60	4.52	4.46	4.55	4.65	4.59	4.49	4.48	4.66
16	1935	4.40	4.26	4.19	4.11	4.05	4.00	3.93	3.93	3.90	3.85	3.81	3.76	4.02
17	1936	3.70	3.68	3.67	3.69	3.65	3.60	3.57	3.55	3.54	3.48	3.35	3.31	3.57
18	1937	3.33	3.43	3.53	3.56	3.48	3.47	3.44	3.41	3.43	3.48	3.42	3.37	3.45
19	1938	3.35	3.35	3.34	3.42	3.31	3.28	3.26	3.26	3.31	3.23	3.14	3.10	3.28
20	1939	3.05	3.01	2.99	3.01	2.96	2.97	2.93	2.97	3.31	3.20	2.99	2.97	3.03
21	1940	2.94	2.94	2.92	2.88	2.99	2.99	2.92	2.92	2.88	2.89	2.86	2.85	2.92
22	1941	2.88	2.88	2.87	2.90	2.87	2.84	2.80	2.81	2.81	2.76	2.74	2.85	2.83
23	1942	2.87	2.91	2.92	2.89	2.89	2.89	2.86	2.86	2.85	2.83	2.81	2.83	2.87
24	1943	2.79	2.76	2.75	2.75	2.74	2.71	2.68	2.69	2.70	2.70	2.73	2.77	2.73
25	1944	2.74	2.74	2.72	2.71	2.70	2.70	2.70	2.69	2.69	2.72	2.75	2.72	2.72
26	1945	2.72	2.69	2.67	2.69	2.69	2.65	2.63	2.65	2.66	2.67	2.64	2.65	2.67
27	1946	2.57	2.51	2.49	2.51	2.56	2.56	2.55	2.57	2.62	2.65	2.66	2.66	2.58
28	1947	2.60	2.60	2.61	2.59	2.60	2.60	2.60	2.60	2.66	2.79	2.85	2.95	2.67
29	1948	2.94	2.92	2.90	2.87	2.86	2.85	2.91	2.96	2.95	2.95	2.96	2.91	2.92
30	1949	2.82	2.83	2.82	2.83	2.82	2.80	2.75	2.71	2.69	2.69	2.66	2.65	2.76
31	1950	2.64	2.64	2.64	2.65	2.69	2.69	2.71	2.66	2.71	2.72	2.72	2.72	2.68
32	1951	2.71	2.73	2.87	2.98	2.97	3.06	3.04	2.96	2.92	2.98	3.09	3.11	2.95
33	1952	3.06	3.01	3.05	3.02	3.02	3.04	3.05	3.06	3.06	3.08	3.05	3.05	3.05
34	1953	3.11	3.18	3.22	3.35	3.50	3.57	3.41	3.38	3.42	3.27	3.20	3.21	3.32
35	1954	3.14	3.03	2.93	2.94	2.97	3.00	2.99	2.98	3.00	2.99	2.99	2.99	3.00
36	1955	3.01	3.06	3.09	3.08	3.11	3.12	3.13	3.17	3.21	3.18	3.17	3.23	3.13
37	1956	3.17	3.13	3.16	3.30	3.34	3.34	3.37	3.48	3.61	3.69	3.76	3.84	3.43
38	1957	3.87	3.81	3.80	3.80	3.85	3.94	4.10	4.25	4.31	4.32	4.30	4.05	4.03
39	1958	3.73	3.68	3.73	3.72	3.69	3.70	3.79	3.98	4.24	4.29	4.25	4.22	3.92
40	1959	4.27	4.31	4.30	4.40	4.57	4.67	4.64	4.66	4.72	4.79	4.68	4.71	4.56

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Docket No. G-19983
Exhibit 11
Schedule A
Witness: McGee
Page 3 of 4

TENNESSEE GAS TRANSMISSION COMPANY
MOODY'S AVERAGE OF YIELDS ON PUBLIC UTILITY BONDS
RATING A

Line No.	Column 1 Year	(2) January	(3) February	(4) March	(5) April	(6) May	(7) June	(8) July	(9) August	(10) September	(11) October	(12) November	(13) December	(14) Average
1	1930	6.87%	7.03%	7.04%	7.36%	7.72%	7.73%	7.82%	7.96%	7.83%	7.77%	7.73%	7.96%	7.57%
2	1931	7.74	7.65	7.61	7.61	7.66	7.64	7.72	7.87	7.32	7.04	6.55	6.32	7.38
3	1932	6.41	6.32	6.22	6.06	5.93	5.91	5.89	5.86	5.69	5.83	5.87	5.95	6.00
4	1933	5.85	5.83	6.06	6.04	6.00	6.06	6.02	5.77	5.95	5.98	6.00	6.05	5.97
5	1934	6.02	6.00	5.97	5.94	5.91	5.79	5.68	5.70	5.71	5.65	5.62	5.63	5.80
6	1935	5.61	5.52	5.53	5.52	5.25	5.25	5.37	5.42	5.40	5.39	5.43	5.36	5.42
7	1936	5.29	5.21	5.23	5.20	5.15	5.13	5.13	5.15	5.17	5.18	5.15	5.12	5.17
8	1937	5.10	5.13	5.13	5.04	5.04	5.05	5.05	5.02	4.98	4.95	4.92	4.88	5.02
9	1938	4.85	4.85	4.82	4.82	4.87	4.99	5.04	5.08	5.05	4.99	4.98	5.05	4.95
10	1939	5.05	5.10	5.14	5.14	5.14	5.23	5.24	5.30	5.38	5.34	5.29	5.23	5.22
11	1930	5.26	5.29	5.18	5.15	5.04	5.01	4.99	4.95	4.86	4.88	4.96	5.11	5.06
12	1931	5.01	5.01	4.89	4.86	4.84	4.87	4.83	4.81	5.05	5.54	5.51	6.24	5.12
13	1932	6.17	6.41	6.06	6.83	7.36	7.57	7.28	6.35	5.91	5.81	5.88	5.85	6.46
14	1933	5.39	5.77	6.34	6.89	6.50	6.11	5.91	5.98	6.36	6.36	7.06	7.22	6.32
15	1934	6.56	5.76	5.66	5.44	5.39	5.40	5.29	5.43	5.56	5.40	5.38	5.36	5.55
16	1935	5.18	4.96	4.88	4.79	4.61	4.53	4.42	4.44	4.43	4.40	4.35	4.29	4.61
17	1936	4.21	4.17	4.17	4.17	4.14	4.12	4.07	4.06	4.05	4.04	3.95	3.83	4.08
18	1937	3.82	3.89	4.00	4.07	4.00	3.99	3.94	3.89	3.96	4.09	4.08	4.03	3.98
19	1938	4.01	4.03	3.99	4.08	3.95	3.95	3.86	3.84	3.88	3.79	3.73	3.74	3.90
20	1939	3.68	3.59	3.54	3.55	3.50	3.47	3.43	3.41	3.71	3.58	3.41	3.38	3.52
21	1940	3.34	3.35	3.34	3.25	3.30	3.34	3.23	3.21	3.18	3.15	3.11	3.10	3.24
22	1941	3.15	3.20	3.16	3.14	3.08	3.03	3.00	2.98	3.00	3.00	2.98	3.06	3.07
23	1942	3.09	3.09	3.12	3.09	3.10	3.12	3.10	3.10	3.08	3.08	3.08	3.06	3.09
24	1943	3.05	3.02	3.01	3.00	3.00	2.98	2.96	2.96	2.96	2.97	2.98	2.99	2.99
25	1944	2.99	2.99	2.97	2.99	2.99	2.99	2.96	2.94	2.93	2.94	2.96	2.97	2.97
26	1945	2.99	2.98	2.97	2.95	2.92	2.87	2.83	2.80	2.79	2.79	2.77	2.75	2.87
27	1946	2.69	2.67	2.66	2.65	2.69	2.70	2.69	2.71	2.75	2.76	2.76	2.76	2.71
28	1947	2.72	2.72	2.72	2.70	2.70	2.71	2.73	2.73	2.80	2.88	2.93	3.05	2.78
29	1948	3.05	3.05	3.02	2.97	2.94	2.94	2.99	3.03	3.05	3.03	3.07	3.06	3.02
30	1949	2.99	2.99	2.97	2.96	2.95	2.94	2.90	2.86	2.85	2.83	2.81	2.78	2.90
31	1950	2.76	2.76	2.76	2.77	2.79	2.79	2.79	2.76	2.80	2.83	2.86	2.86	2.79
32	1951	2.83	2.84	2.95	3.09	3.13	3.21	3.26	3.19	3.14	3.17	3.24	3.29	3.11
33	1952	3.29	3.23	3.25	3.23	3.22	3.22	3.22	3.24	3.24	3.26	3.24	3.22	3.24
34	1953	3.25	3.30	3.36	3.47	3.63	3.71	3.66	3.61	3.62	3.49	3.40	3.38	3.49
35	1954	3.32	3.23	3.16	3.16	3.14	3.16	3.14	3.13	3.12	3.12	3.11	3.11	3.16
36	1955	3.13	3.14	3.15	3.15	3.19	3.21	3.21	3.24	3.27	3.30	3.32	3.35	3.22
37	1956	3.31	3.29	3.29	3.40	3.48	3.49	3.55	3.63	3.72	3.79	3.82	3.91	3.56
38	1957	3.96	4.05	4.05	4.01	4.01	4.09	4.20	4.37	4.55	4.61	4.62	4.36	4.24
39	1958	3.93	3.96	4.13	3.95	4.01	3.99	4.04	4.29	4.55	4.56	4.47	4.49	4.20
40	1959	4.52	4.50	4.47	4.56	4.77	4.86	4.88	4.89	5.03	4.96	4.90	4.96	4.78

(2213)

TENNESSEE GAS TRANSMISSION COMPANY
MOODY'S AVERAGE OF YIELDS ON PUBLIC UTILITY BONDS
RATING Baa

Line No.	Column 1 Year	(2) January	(3) February	(4) March	(5) April	(6) May	(7) June	(8) July	(9) August	(10) September	(11) October	(12) November	(13) December	(14) Average
1	1920	7.30%	7.48%	7.59%	7.88%	8.03%	7.99%	8.21%	8.21%	8.29%	8.27%	8.28%	8.36%	7.99%
2	1921	8.51	8.50	8.51	8.52	8.54	8.62	8.64	8.66	8.30	8.40	7.92	7.68	8.40
3	1922	7.83	7.74	7.55	7.29	6.86	6.92	6.83	6.88	6.77	6.51	6.56	6.56	7.03
4	1923	6.59	6.60	6.73	6.78	6.78	6.80	6.79	6.77	6.81	6.79	6.78	6.80	6.75
5	1924	6.73	6.64	6.60	6.55	6.42	6.32	6.23	6.24	6.24	6.21	6.24	6.13	6.38
6	1925	6.12	6.08	6.02	5.99	5.85	5.82	5.83	5.87	5.85	5.83	5.81	5.88	5.91
7	1926	5.81	5.76	5.80	5.75	5.67	5.61	5.61	5.62	5.62	5.61	5.58	5.54	5.67
8	1927	5.51	5.54	5.54	5.49	5.50	5.51	5.48	5.43	5.41	5.39	5.38	5.32	5.46
9	1928	5.24	5.20	5.18	5.18	5.23	5.38	5.38	5.43	5.45	5.43	5.38	5.42	5.33
10	1929	5.48	5.52	5.62	5.69	5.66	5.72	5.79	5.89	5.92	5.91	6.00	5.96	5.76
11	1930	5.92	5.93	5.80	5.77	5.76	5.78	5.78	5.70	5.63	5.82	6.15	6.56	5.88
12	1931	6.36	6.37	6.18	6.19	6.36	6.60	6.47	6.60	7.04	8.01	7.80	8.81	6.90
13	1932	8.18	8.33	8.31	9.56	10.21	10.70	10.11	7.92	7.48	7.87	8.32	8.41	8.78
14	1933	8.14	8.89	9.87	10.64	9.30	8.63	8.26	8.75	9.71	9.90	10.30	10.12	9.38
15	1934	8.86	7.58	7.58	7.18	7.17	7.20	7.36	7.68	7.62	7.38	7.21	7.03	7.49
16	1935	6.60	6.20	5.99	5.94	5.51	5.41	5.22	5.22	5.25	5.24	5.12	5.07	5.56
17	1936	4.88	4.80	4.78	4.77	4.76	4.72	4.62	4.59	4.54	4.53	4.53	4.53	4.67
18	1937	4.50	4.55	4.76	4.98	5.02	5.17	5.08	5.04	5.25	5.53	5.59	5.60	5.09
19	1938	5.59	5.79	5.80	5.82	5.32	5.33	5.01	4.93	5.05	4.90	4.77	4.77	5.26
20	1939	4.66	4.59	4.53	4.62	4.50	4.41	4.39	4.39	4.64	4.48	4.38	4.36	4.50
21	1940	4.30	4.23	4.14	4.06	4.10	4.15	3.99	3.98	3.94	3.92	3.88	3.86	4.05
22	1941	3.87	3.90	3.90	3.86	3.85	3.83	3.82	3.80	3.80	3.82	3.82	3.85	3.84
23	1942	3.83	3.81	3.84	3.79	3.76	3.73	3.68	3.67	3.66	3.66	3.67	3.63	3.73
24	1943	3.65	3.61	3.58	3.60	3.60	3.60	3.55	3.55	3.55	3.53	3.55	3.55	3.58
25	1944	3.54	3.53	3.52	3.53	3.53	3.53	3.51	3.51	3.51	3.53	3.54	3.50	3.52
26	1945	3.50	3.48	3.48	3.49	3.47	3.43	3.40	3.37	3.34	3.29	3.22	3.15	3.39
27	1946	3.07	3.00	2.96	2.98	3.02	3.04	3.03	3.02	3.06	3.06	3.07	3.07	3.03
28	1947	3.05	3.03	3.04	3.04	3.03	3.04	3.03	3.02	3.06	3.13	3.18	3.25	3.08
29	1948	3.30	3.31	3.29	3.28	3.27	3.29	3.34	3.40	3.42	3.44	3.48	3.47	3.36
30	1949	3.42	3.40	3.36	3.31	3.30	3.28	3.25	3.25	3.22	3.19	3.17	3.16	3.28
31	1950	3.18	3.17	3.16	3.15	3.15	3.15	3.18	3.18	3.19	3.20	3.21	3.21	3.18
32	1951	3.21	3.21	3.23	3.31	3.38	3.45	3.49	3.48	3.44	3.49	3.49	3.53	3.39
33	1952	3.57	3.55	3.55	3.54	3.54	3.55	3.53	3.50	3.50	3.50	3.47	3.50	3.53
34	1953	3.51	3.53	3.56	3.62	3.75	3.80	3.83	3.88	3.93	3.86	3.78	3.72	3.73
35	1954	3.72	3.69	3.58	3.53	3.51	3.50	3.48	3.47	3.44	3.41	3.39	3.38	3.51
36	1955	3.37	3.38	3.38	3.40	3.40	3.41	3.43	3.46	3.48	3.47	3.48	3.50	3.43
37	1956	3.50	3.50	3.51	3.59	3.62	3.65	3.70	3.84	4.02	4.15	4.15	4.18	3.78
38	1957	4.26	4.26	4.25	4.24	4.28	4.33	4.41	4.49	4.66	4.73	4.82	4.81	4.46
39	1958	4.60	4.21	4.25	4.25	4.23	4.20	4.19	4.44	4.69	4.74	4.67	4.65	4.43

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Docket No. G-19983
Exhibit 11
Schedule B
Witness: McGee

TENNESSEE GAS TRANSMISSION COMPANY
TABULATION OF MOODY'S AVERAGE RATE ON "A" RATED PUBLIC UTILITY BONDS
FOR THE MONTH OF ISSUE AND YIELDS TO MATURITY OF FIRST MORTGAGE PIPE LINE BONDS

Series	Date of Issuance	Offering Price Per Unit	Yield to Maturity	Moody's "A" Rated Public Utility Bond Average
2-3/4% Series due 1966	April, 1946	101.500	2.65%	2.65%
3 % Series due 1967	September, 1947	102.250	2.85	2.80
3 % Series due 1969	June, 1949	100.750	2.95	2.94
3 % Series due 1970	September, 1950	101.750	2.88	2.80
3-1/8% Series due 1971	March, 1951	101.250	3.04	2.95
3-1/2% Series due 1971	September, 1951	100.718	3.45	3.14
3-7/8% Series due 1972	September, 1952	101.747	3.75	3.24
4-1/8% Series due 1973	February, 1953	101.295	4.03	3.30
4 % Series due 1973	December, 1953	101.379	3.90	3.38
3-5/8% Series due 1974	June, 1954	101.787	3.50	3.16
3-3/4% Series due 1974	September, 1954	100.000	3.75	3.12
3-1/2% Series due 1975	December, 1954	101.440	3.40	3.11
3-7/8% Series due 1976	September, 1955	101.060	3.80	3.27
4-3/4% Series due 1976	September, 1956	100.650	4.70	3.72
5-1/4% Series due 1977	June, 1957	100.000	5.25	4.09
5-3/8% Series due 1979	September, 1958	100.000	5.38	4.55
5-1/4% Series due 1979	July, 1959	101.250	5.15	4.88

TENNESSEE GAS TRANSMISSION COMPANY
COST OF LONG-TERM DEBT CAPITAL
AT DATES OF RATE CASES

Line No.	Column 1	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Particulars	Date of Issuance	Cost to Company	Principal Amount of Issue	September 30,1946(G-606) Amount Outstanding	Total Cost	April 30, 1951 (G-1741) Amount Outstanding	Total Cost	June 30, 1952 (G-2052) Amount Outstanding	Total Cost	June 30, 1953 (G-2252) Amount Outstanding	Total Cost
1	FIRST MORTGAGE PIPE LINE											
2	BONDS:											
3	2-3/4% Series, 1966	April 12, 1946	2.75%	$ 35,000,000	$35,000,000	$ 962,500	$ 31,623,000	$ 869,633	$ 30,747,000	$ 845,543	$ 29,820,000	$ 820,050
4	3% Series, 1967	September 16, 1947	2.93	40,000,000	-	-	36,200,000	1,060,660	34,700,000	1,016,710	33,200,000	972,760
5	3% Series, 1969	June 27, 1949	3.01	50,000,000	-	-	48,063,000	1,446,696	46,149,000	1,389,085	44,313,000	1,333,821
6	3% Series, 1970	September 15, 1950	2.94	40,000,000	-	-	40,000,000	1,176,000	39,200,000	1,152,480	37,700,000	1,108,380
7	3-1/8% Series, 1971	March 2, 1951	3.05	35,000,000	-	-	35,000,000	1,067,500	34,650,000	1,056,825	33,650,000	1,026,325
8	3-1/2% Series, 1971	September 17, 1951	3.51	45,000,000	-	-	-	-	44,950,000	1,577,745	44,100,000	1,547,910
9	3-7/8% Series, 1972	September 15, 1952	3.83	40,000,000	-	-	-	-	-	-	40,000,000	1,532,000
10	4-1/8% Series, 1973	February 17, 1953	4.15	30,000,000	-	-	-	-	-	-	30,000,000	1,245,000
11	4% Series, 1973	December 8, 1953	4.00	25,000,000	-	-	-	-	-	-	-	-
12	3-5/8% Series, 1974	June 28, 1954	3.57	25,000,000	-	-	-	-	-	-	-	-
13	3-3/4% Series, 1974	September 3, 1954	3.82	18,000,000	-	-	-	-	-	-	-	-
14	3-1/2% Series, 1975	December 14, 1954	3.49	125,000,000	-	-	-	-	-	-	-	-
15	3-7/8% Series, 1976	September 20, 1955	3.92	50,000,000	-	-	-	-	-	-	-	-
16	4-3/4% Series, 1976	September 26, 1956	4.85	50,000,000	-	-	-	-	-	-	-	-
17	5-1/4% Series, 1977	June 5, 1957	5.43	50,000,000	-	-	-	-	-	-	-	-
18	5-3/8% Series, 1979	September 23, 1958	5.54	50,000,000	-	-	-	-	-	-	-	-
19	5-1/4% Series, 1979	July 29, 1959	5.27	50,000,000	-	-	-	-	-	-	-	-
20					$35,000,000	$ 962,500	$190,886,000	$5,620,489	$230,396,000	$7,038,388	$292,783,000	$ 9,586,246
21	Weighted average cost of mortgage bonds					2.75%		2.94%		3.05%		3.27%
22	DEBENTURES:											
23	3-7/8% Series, 1966	June 15, 1948	3.94%	$ 25,000,000	$ -	$ -	$ 22,916,000	$ 902,890	$ 21,244,000	$ 837,014	$ 19,473,000	$ 767,236
24	4-7/8% Series, 1971	December 10, 1951	4.85	25,000,000	-	-	-	-	25,000,000	1,212,500	23,100,000	1,120,350
25	5% Series, 1973	September 21, 1953	4.99	20,000,000	-	-	-	-	-	-	-	-
26	4-1/4% Series, 1974	September 21, 1954	4.23	65,000,000	-	-	-	-	-	-	-	-
27	4% Series, 1975	April 13, 1955	4.03	25,000,000	-	-	-	-	-	-	-	-
28	4-1/2% Series, 1977	July 17, 1956	4.68	30,000,000	-	-	-	-	-	-	-	-
29	6% Series, 1977	July 31, 1957	6.33	25,000,000	-	-	-	-	-	-	-	-
30	5% Series, 1978	April 23, 1958	5.20	30,000,000	-	-	-	-	-	-	-	-
31					$ -	$ -	$ 22,916,000	$ 902,890	$ 46,244,000	$2,049,514	$ 42,573,000	$ 1,887,586
32	Weighted average cost of debentures							3.94%		4.43%		4.43%
33	BANK LOANS:											
34	2%, due 1956	April 21, 1946	2.01%	$ 10,000,000								
35	2%, due 1956	December 16, 1946	2.01	5,000,000	($10,000,000	$ 201,000	$ 9,690,000	$ 194,770	$ 7,035,000	$ 141,404	$ 5,260,000	$ 105,827
36	2-1/4%, due 1960	August 29, 1950	2.25	4,425,000	-	-	4,060,000	91,350	2,965,000	66,713	2,240,000	50,287
37	4-3/8%, due 1962	July 31, 1959	4.37	8,000,000	-	-	-	-	-	-	-	-
38					$10,000,000	$ 201,000	$ 13,750,000	$ 286,120	$ 10,000,000	$ 208,117	$ 7,500,000	$ 156,114
39	Weighted average cost of bank loans					2.01%		2.08%		2.08%		2.08%
40					$45,000,000	$1,163,500	$227,552,000	$6,809,499	$286,640,000	$9,296,019	$342,850,000	$11,629,946
41	Weighted average cost of total long-term debt					2.59%		2.99%		3.24%		3.39%

Docket No.
Exhibit
Witness

(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
2, 1953 (G-2252)	March 31, 1954 (G-2434)		August 31, 1954 (G-5259)		October 31, 1954 (G-1190)		July 31, 1956 (G-7166)		July 31, 1959 (G-[illegible])		October 6, 1959
Amount			Amount		Amount		Amount		Amount		Amount
ding Total Cost	Outstanding	Total Cost	Outstanding	Total Cost	Outstanding	Total Cost	Outstanding	Total Cost	Outstanding	Total Cost	Outstanding
0,000 $ 880,050	$ 28,841,000	$ 793,126	$ 28,841,000	$ 793,127	$ 25,536,000	$ 702,299	$ 21,969,000	$ 604,148	$ 19,500,000	$ 536,250	$ 18,237,000
0,000 972,760	31,677,000	928,136	30,927,000	906,161	27,700,000	811,610	24,700,000	723,710	22,700,000	665,110	21,700,000
3,000 1,333,821	43,342,000	1,304,594	42,417,000	1,276,752	38,688,000	1,164,509	33,650,000	1,012,865	31,025,000	933,853	31,025,000
0,000 1,108,380	36,200,000	1,064,280	35,450,000	1,042,230	31,970,000	939,918	28,420,000	835,548	25,990,000	764,106	24,780,000
0,000 1,026,325	31,839,000	971,090	31,680,000	966,240	28,620,000	872,910	25,150,000	767,075	23,550,000	718,275	23,550,000
0,000 1,547,910	42,413,000	1,488,696	41,569,000	1,459,072	37,960,000	1,332,396	34,760,000	1,220,076	32,760,000	1,149,876	31,760,000
0,000 1,532,000	39,200,000	1,501,360	38,450,000	1,472,635	-	-	-	-	-	-	-
0,000 1,245,000	29,700,000	1,232,550	29,400,000	1,220,100	-	-	-	-	-	-	-
- -	25,000,000	1,000,000	25,000,000	1,000,000	-	-	-	-	-	-	-
- -	-	-	25,000,000	892,500	-	-	-	-	-	-	-
- -	-	-	-	-	24,037,000	858,121	21,920,000	782,544	20,860,000	744,702	20,860,000
- -	-	-	-	-	16,800,000	641,760	15,200,000	607,380	14,850,000	580,640	14,850,000
- -	-	-	-	-	120,460,000	4,204,054	111,590,000	3,834,491	107,130,000	3,738,837	107,130,000
- -	-	-	-	-	49,500,000	1,940,400	46,000,000	1,803,200	44,000,000	1,724,800	44,000,000
- -	-	-	-	-	50,000,000	2,425,000	49,000,000	2,376,500	46,040,000	2,232,940	44,890,000
- -	-	-	-	-	-	-	49,500,000	2,687,850	47,925,000	2,602,328	47,925,000
- -	-	-	-	-	-	-	-	-	50,000,000	2,770,000	50,000,000
- -	-	-	-	-	-	-	-	-	50,000,000	2,635,000	50,000,000
3,000 $ 9,586,246	$308,212,000	$10,283,834	$328,734,000	$11,028,817	$451,273,000	$15,892,973	$462,559,000	$17,315,387	$536,680,000	$21,796,717	$530,707,000
3.27%		3.34%		3.35%		3.52%		3.74%		4.06%	
3,000 $ 767,236	$ 19,473,000	$ 767,236	$ 18,860,000	$ 743,084	$ 15,612,000	$ 615,073	$ 13,507,000	$ 532,176	$ 12,035,000	$ 474,179	$ 12,035,000
0,000 1,120,350	22,200,000	1,076,700	21,300,000	1,033,050	-	-	-	-	-	-	-
- -	20,000,000	998,000	19,200,000	958,080	-	-	-	-	-	-	-
- -	-	-	-	-	60,150,000	2,544,345	56,975,000	2,410,043	55,050,000	2,328,615	54,100,000
- -	-	-	-	-	24,500,000	987,350	22,655,000	912,997	21,425,000	863,428	20,810,000
- -	-	-	-	-	30,000,000	1,404,000	28,733,000	1,344,704	27,394,000	1,282,273	27,394,000
- -	-	-	-	-	-	-	25,000,000	1,582,500	24,000,000	1,519,200	23,500,000
- -	-	-	-	-	-	-	30,000,000	1,560,000	29,420,000	1,529,840	28,840,000
4,000 $ 1,887,586	$ 61,673,000	$ 2,841,936	$ 59,360,000	$ 2,734,214	$130,262,000	$ 5,550,768	$176,870,000	$ 6,342,420	$169,324,000	$ 6,497,532	$168,884,000
4.43%		4.61%		4.61%		4.26%		4.72%		4.72%	
,000 $ 105,827	$ 4,380,000	$ 88,038	$ 3,490,000	$ 70,250	$ -	$ -	$ -	$ -	$ -	$ -	$ -
,000 50,287	1,870,000	42,075	1,505,000	33,861	-	-	-	-	-	-	-
- -	-	-	-	-	-	-	-	-	-	-	-
2,000 $ 156,114	$ 6,250,000	$ 130,113	$ 5,000,000	$ 104,113	$ -	$ -	$ -	$ -	$ 5,000,000	$ 227,240	$ 4,900,000
2.08%		2.08%		2.08%						4.37%	
,000 $11,629,946	$376,135,000	$13,255,883	$393,094,000	$13,867,144	$581,534,000	$21,443,741	$639,429,000	$25,657,807	$711,204,000	$28,521,492	$703,591,000
3.39%		3.52%		3.53%		3.69%		4.01%		4.01%	

TENNESSEE GAS TRANSMISSION COMPANY
COST OF PREFERRED STOCK CAPITAL
AT DATES OF RATE CASES

Line No.	Column 1 Particulars	(2) Date of Issuance	(3) Cost to Company	(4) Principal Amount of Issue	(5) Amount Outstanding	(6) Total Cost	(7) Amount Outstanding	(8) Total Cost	(9) Amount Outstanding	(10) Total Cost	(11) Amount Outstanding	(12) Total Cost
1	PREFERRED STOCK:											
2	$100-Par											
3	4.10% Series	April 12, 1946	3.96%	$10,000,000	$10,000,000	$386,000	$10,000,000	$ 386,000	$10,000,000	$ 386,000	$ 3,940,000	$ 386,000
4	4.25% Series	September 16, 194	4.26%	10,000,000	-	-	10,000,000	426,000	10,000,000	426,000	4,260,000	426,000
5	4.65% Series	October 3, 1949	4.67%	10,000,000	-	-	10,000,000	467,000	10,000,000	467,000	10,000,000	467,000
6	4.60% Series	April 10, 1950	4.51%	10,000,000	-	-	10,000,000	451,000	10,000,000	451,000	10,000,000	451,000
7	4.64% Series	October 27, 1950	4.66%	10,000,000	-	-	10,000,000	466,000	10,000,000	466,000	10,000,000	466,000
8	5.10% Series	May 15, 1951	5.25%	10,000,000	-	-	-	-	10,000,000	525,000	10,000,000	525,000
9	5.25% Series	June 4, 1952	5.50%	10,000,000	-	-	-	-	10,000,000	550,000	10,000,000	550,000
10	5.85% Series	September 21, 1953	6.15%	10,000,000	-	-	-	-	-	-	-	-
11	5.12% Series	April 5, 1954	5.37%	10,000,000	-	-	-	-	-	-	-	-
12	4.90% Series	June 21, 1955	5.18%	20,000,000	-	-	-	-	-	-	-	-
13					$10,000,000	$386,000	$50,000,000	$2,196,000	$70,000,000	$3,271,000	$84,200,000	$3,966,000
14	Weighted average cost of Preferred Stock					3.86%		4.39%		4.67%		4.71%
15	SECOND PREFERRED:											
16	4.50% Series	February 28, 1956	4.65%	$40,000,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
17	5.00% Series	September 26, 1956	5.17%	20,000,000	-	-	-	-	-	-	-	-
18	5.00% Series	Oct., 1957 - April, 1958	5.00%	12,146,900	-	-	-	-	-	-	-	-
19	5.16% Series	March 17, 1958	5.34%	20,000,000	-	-	-	-	-	-	-	-
20	4.72% Series	April 15, 1959	4.88%	44,000,000	-	-	-	-	-	-	-	-
21					$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
22	Weighted average cost of Second Preferred Stock											

Docket No. G-19983
Exhibit 11
Schedule D
Witness: McGee

(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
6-30-53 (G-2242)		3-31-54 (G-2644)		[illegible]		10-31-56 (G-11980)		7-31-58 (G-17166)		7-31-59 (G-19983)		10-31-59	
Amount Outstanding	Total Cost	Amount Outstanding	Total Cost	Amount Outstanding	Total Cost	Amount Outstanding	Total Cost	Amount Outstanding	Total Cost	Amount Outstanding	Total Cost	Amount Outstanding	Total Cost
4,930,000	$ 383,296	$ 9,648,100	$ 370,294	$ 9,648,100	$ 470,294	$ 8,600,000	$ 334,960	$ 8,060,400	$ 311,131	$ 7,721,400	$ 296,046	$ 7,657,000	$ 295,560
3,965,000	424,509	9,649,800	411,092	9,649,800	411,092	8,778,100	373,862	8,160,000	347,616	7,837,200	325,345	7,427,500	316,412
7,000,000	467,000	10,000,000	467,000	10,000,000	467,000	9,600,600	448,267	9,280,000	433,977	8,964,600	414,911	8,647,000	413,155
0,000,000	451,000	10,000,000	452,000	10,000,000	452,000	9,601,100	433,010	9,220,000	415,822	8,871,400	404,610	8,760,400	395,094
0,000,000	466,000	10,000,000	466,000	10,000,000	466,000	9,918,000	462,179	9,500,000	442,700	9,082,000	423,221	9,000,000	419,400
0,000,000	525,000	10,000,000	525,000	10,000,000	525,000	10,000,000	525,000	9,580,000	502,950	9,250,000	485,625	9,236,000	484,890
0,000,000	550,000	10,000,000	550,000	10,000,000	550,000	10,000,000	550,000	9,750,000	536,250	9,500,000	522,500	9,500,000	522,500
-	-	-	-	10,000,000	615,000	-	-	-	-	-	-	-	-
-	-	-	-	10,000,000	637,000	10,000,000	637,000	10,000,000	637,000	9,944,600	534,025	9,750,000	523,575
-	-	-	-	-	-	20,000,000	1,036,000	20,000,000	1,036,000	20,000,000	1,036,000	20,000,000	1,036,000
3,895,000	$3,266,807	$79,296,900	$3,457,305	$89,242,900	$4,480,275	$96,553,900	$4,700,068	$93,540,400	$4,561,444	$90,991,200	$4,444,283	$90,177,900	$4,406,586
	4.67%		4.86%		4.42%		4.87%		4.88%		4.88%		4.89%
-	$ -	$ -	$ -	$ -	$ -	$40,000,000	$1,960,000	$39,316,000	$1,828,194	$27,849,700	$1,295,011	$26,516,200	$1,233,004
-	-	-	-	-	-	20,000,000	1,034,000	30,265,100	1,546,547	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	19,985,000	1,067,199	-	-	-	-
-	-	-	-	-	-	-	-	-	-	44,000,000	2,147,200	44,000,000	2,147,200
-	$ -	$ -	$ -	$ -	$ -	$60,000,000	$2,894,000	$89,566,100	$4,441,940	$71,849,700	$3,442,211	$70,516,200	$3,380,204
							4.82%		4.96%		4.79%		4.79%

TENNESSEE GAS TRANSMISSION COMPANY
MONTH-END BANK BALANCES
TWELVE MONTHS ENDED JULY 31, 1959

Line No.	Column 1 Particulars	(2) National Bank of Commerce - Houston	(3) First National Bank - Dallas	(4) Bankers Trust Company - N.Y.	(5) Chase Manhattan Bank - N.Y.	(6) Chemical Corn Exchange Bank - N.Y.	(7) Guaranty Trust Company - N.Y.	(8) Irving Trust Company - N.Y.	(9) J. P. Morgan and Company Inc. - N. Y.	(10) First National City Bank - N.Y.
1	1958 - July	$ 1,432,740	$ 2,593,957	$ 1,212,290	$ 6,084,152	$ 2,727,446	$ 680,057	$ 732,813	$ 1,601,328	$ 4,075,106
2	Aug.	1,403,408	1,497,009	812,290	5,374,005	1,912,876	861,024	432,813	801,328	3,575,106
3	Sept.	4,472,453	3,099,055	1,012,290	8,581,104	2,612,876	1,222,141	632,813	801,328	4,912,906
4	Oct.	2,910,585	2,523,618	1,012,290	6,822,189	2,612,876	1,424,757	632,813	801,328	4,912,906
5	Nov.	3,719,201	2,448,618	1,012,290	6,698,588	2,612,876	1,443,214	632,813	801,328	4,912,906
6	Dec.	2,519,640	2,548,618	1,012,290	6,176,683	2,512,876	1,127,276	632,813	801,328	4,350,705
7	1959 - Jan.	2,094,808	3,031,039	1,012,290	7,330,504	3,012,876	1,507,188	632,813	801,328	4,850,705
8	Feb.	5,158,307	3,231,039	1,012,290	6,886,855	2,512,876	1,259,952	632,813	801,328	4,100,705
9	March	2,211,833	3,098,246	1,012,290	6,170,047	2,512,876	1,070,046	632,813	801,328	4,512,178
10	April	2,529,083	3,098,246	1,862,290	8,097,008	4,087,877	-	432,813	-	6,041,178
11	May	1,439,447	2,194,428	1,862,290	6,810,785	3,837,876	-	332,813	-	8,766,179
12	June	1,459,136	2,516,347	1,112,290	6,515,666	3,337,876	-	332,813	-	4,419,426
13	July	2,243,038	2,016,347	1,138,317	7,027,650	3,037,876	-	332,813	-	4,444,444
14	Average	$ 2,584,129	$ 2,607,428	$ 1,160,446	$ 6,813,480	$ 2,871,689	$ 815,050	$ 540,505	$ 616,304	$ 4,851,881

Docket No. G-19[illegible]
Exhibit 11
Schedule E
Witness: McGee

(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
Morgan Company - N. Y.	First National City Bank - N.Y.	New York Trust Co. - N.Y.	First National Bank - Chicago	Harris Trust & Savings Bank - Chicago	Northern Trust Co. - Chicago	Mellon National Bank & Trust Co. - Pittsburgh	First National Bank - Boston	Morgan Guaranty Trust Co. - N.Y.	All Other Banks	Total
301,328	$ 4,075,106	$ 818,932	$ 2,108,139	$ 799,960	$ 1,435,000	$ 1,244,395	$ 1,071,413	$ -	$4,401,780	$33,019,507
301,328	3,575,106	318,932	1,550,876	524,960	935,000	1,058,688	821,413	-	2,882,743	24,762,471
301,328	4,912,906	668,932	2,095,623	724,960	1,177,004	2,084,891	971,413	-	5,614,669	40,684,458
301,328	4,512,906	668,932	1,759,394	724,960	1,177,004	1,359,306	971,413	-	4,273,035	34,187,406
301,328	4,512,906	668,932	1,778,185	724,960	1,177,004	1,922,877	971,413	-	5,175,080	36,330,285
301,328	4,350,705	668,932	1,512,304	624,960	1,027,004	1,473,575	971,413	-	3,757,183	31,717,600
301,328	4,850,705	668,932	1,965,512	624,960	1,027,004	2,015,471	971,413	-	4,852,380	36,399,223
301,328	4,100,705	668,932	1,579,845	624,960	1,027,004	2,213,824	971,413	-	5,428,335	38,110,478
301,328	4,512,178	668,932	1,711,015	724,960	1,277,004	2,029,004	971,413	-	3,752,399	33,150,284
-	8,041,178	668,932	2,218,346	674,960	877,004	2,447,423	871,413	4,264,668	6,185,161	44,356,402
-	8,766,179	468,932	2,042,186	474,960	777,005	1,753,667	721,413	3,221,606	5,334,073	40,037,660
-	4,419,426	368,932	1,662,675	474,960	677,004	1,422,186	671,413	2,731,690	3,848,456	31,550,870
-	4,444,444	368,932	1,545,673	474,960	677,004	1,462,113	671,413	2,664,586	5,997,529	34,102,695
316,304	$ 4,851,881	$ 592,009	$ 1,809,983	$ 630,729	$ 1,020,542	$ 1,729,340	$ 894,490	$ 930,965	$4,730,987	$35,259,957

Hearing Exhibit No. 13

TENNESSEE GAS TRANSMISSION COMPANY
RATE OF RETURN
1959 VS 1946

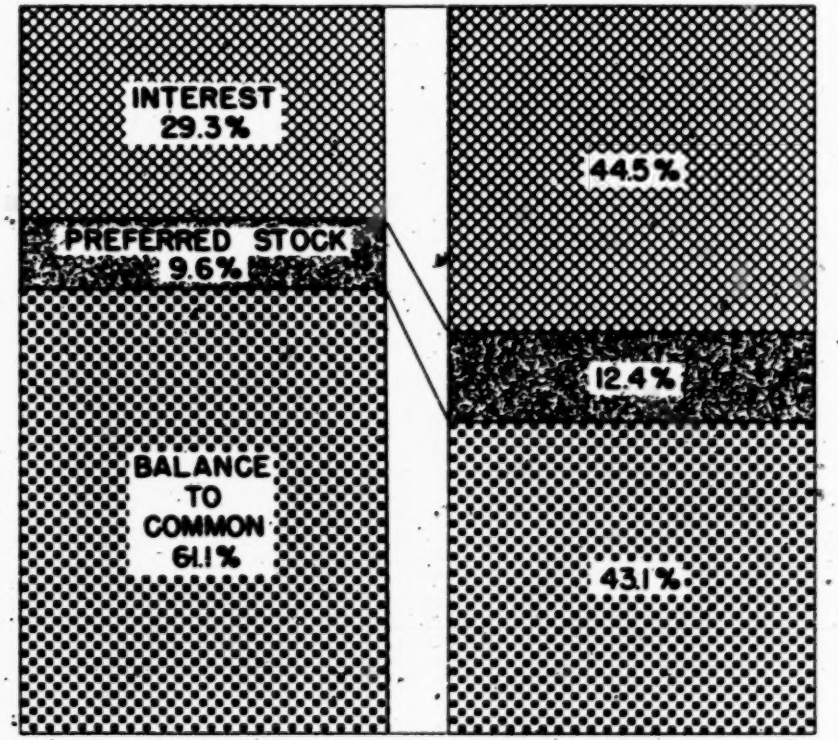
Line No.	Column 1 Particulars	(2) Capital Ratio	(3) Rate	(4) Return Element
1	JULY 31, 1959:			
2	Long-term debt	61.47%	4.22%	2.59%
3	First preferred stock	7.87	4.88	0.38
4	4.72% second preferred stock	3.80	4.88	0.19
5	Common equity (1)	26.86	10.57	2.84
6	Total	100.00%		6.00%
7	SEPTEMBER 30, 1946:			
8	Long-term debt	59.11%	2.59%	1.53%
9	First preferred stock	13.14	3.86	0.51
10	Common equity	27.75	10.57	2.93
11	Total	100.00%		4.97%

12 (1) Includes 4.50% series convertible second
13 preferred stock.

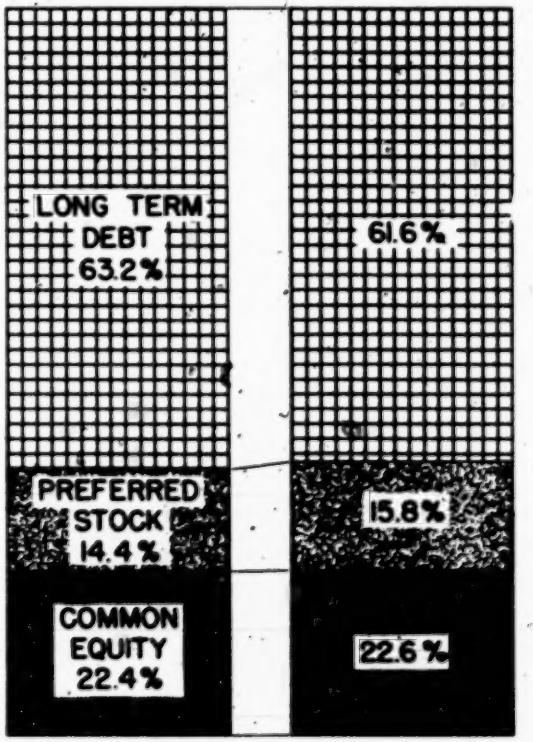
TENNESSEE GAS TRANSMISSION COMPANY

(2223)

DISPOSITION OF GROSS INCOME



AVERAGE CAPITALIZATION



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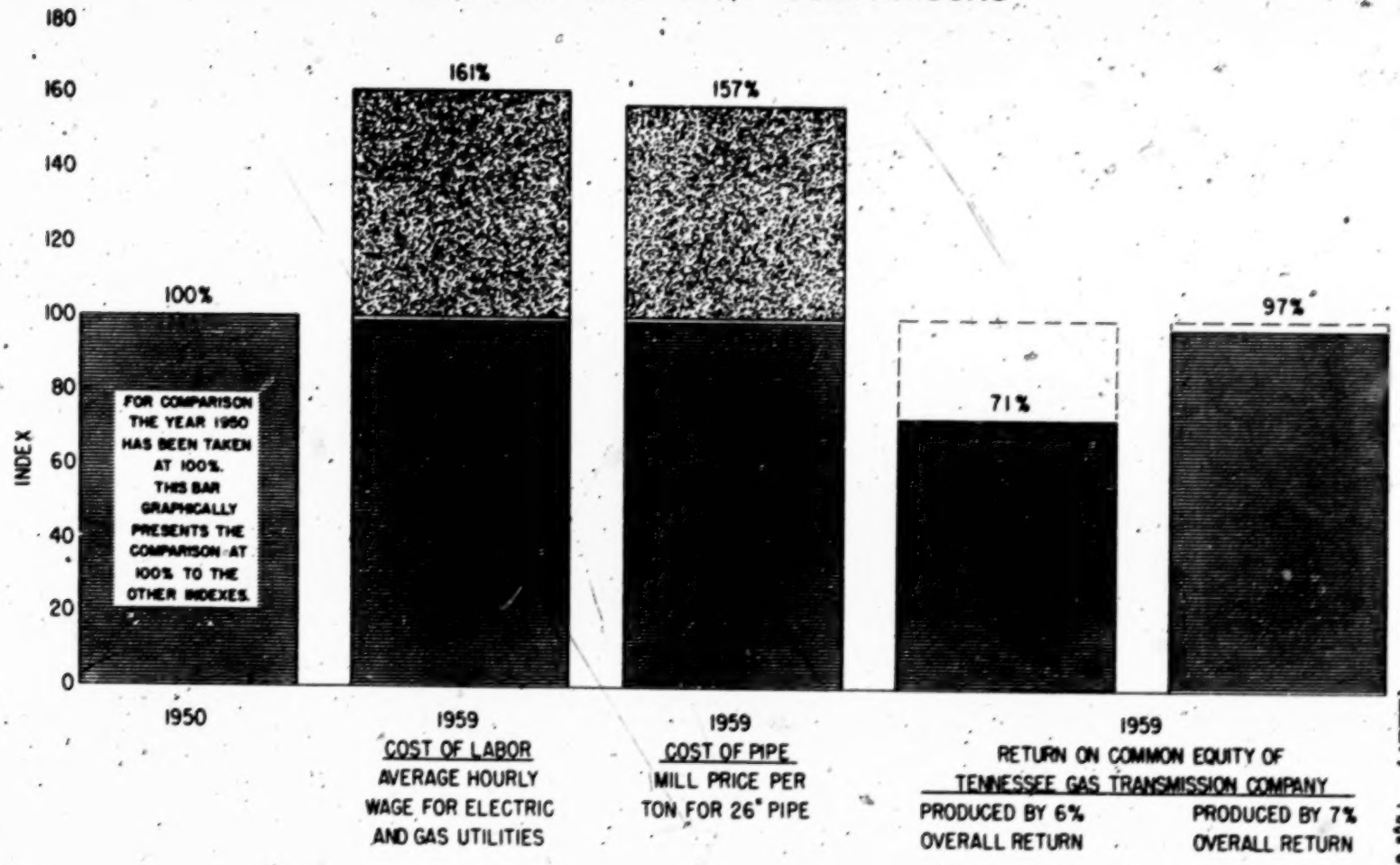
Page 2

TENNESSEE GAS TRANSMISSION COMPANY

EARNINGS AND COST COMPARISONS



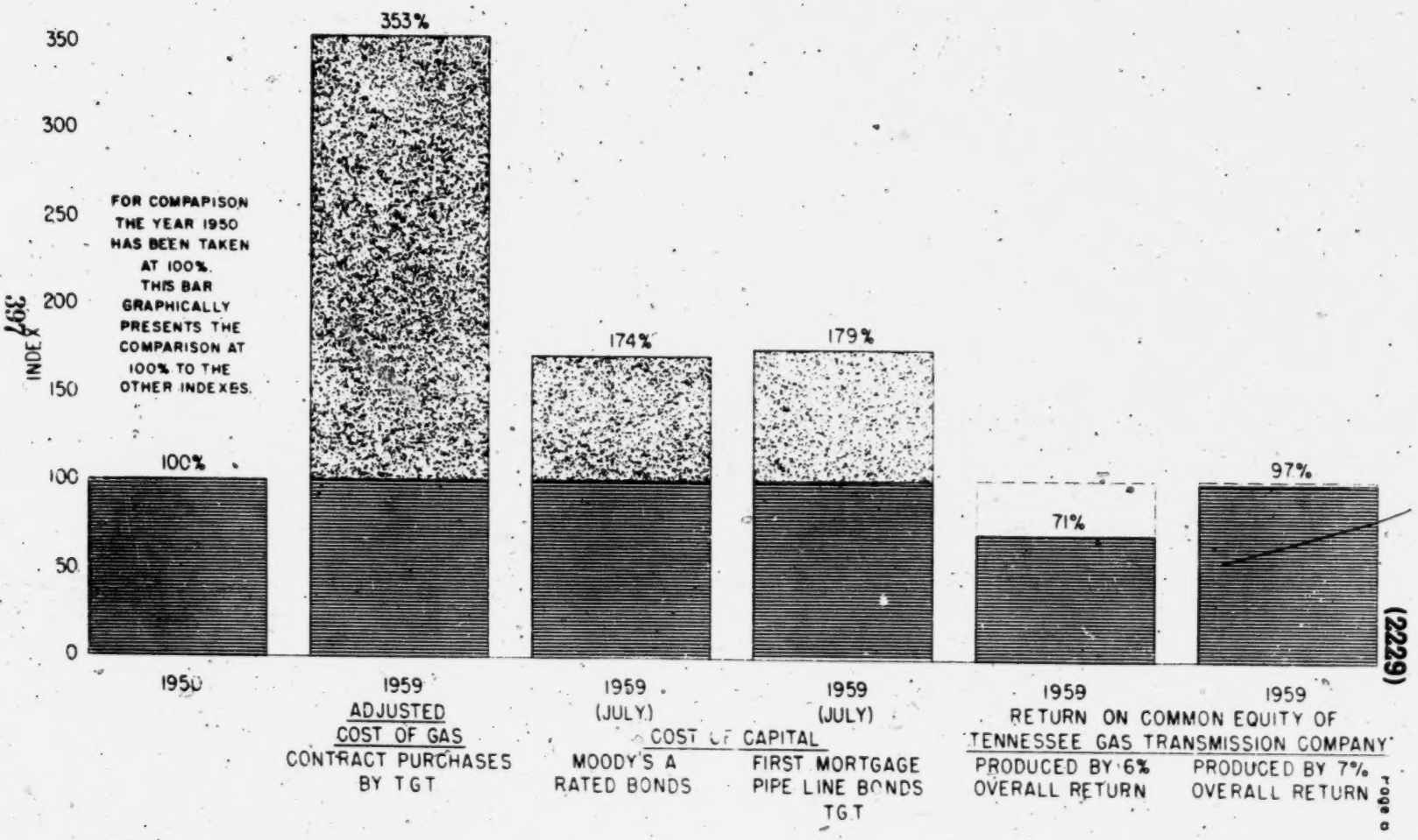
(2227)

TENNESSEE GAS TRANSMISSION COMPANY
EARNINGS AND COST COMPARISONS

Column 1	(2)	(3)	(4)
Particulars	1950	1959	Index (Column 3 ÷ Column 2)
Average hourly gross earnings for gas and electric utility workers per U. S. Department of Commerce 1957 Biennial Edition of Business Statistics and August, 1959 Survey of Current Business.	$ 1.60	$ 2.57	161%
Mill price per ton for 26" O.D. x 9/32" W.T. pipe per A. O. Smith Corporation in 1950 and National Tube Company in 1959.	$123.00	$192.88	157%
Earnings on common equity of Tennessee Gas Transmission Company produced by 6% overall rate of return based on 12/31/50 capitalization and 6% overall rate of return based on 10/31/59 capitalization.	15.54%	11.06%	71%
Earnings on common equity of Tennessee Gas Transmission Company produced by 6% overall rate of return based on 12/31/50 capitalization and 7% overall rate of return based on 10/31/59 capitalization.	15.54%	15.10%	97%

TENNESSEE GAS TRANSMISSION COMPANY

EARNINGS AND COST COMPARISONS



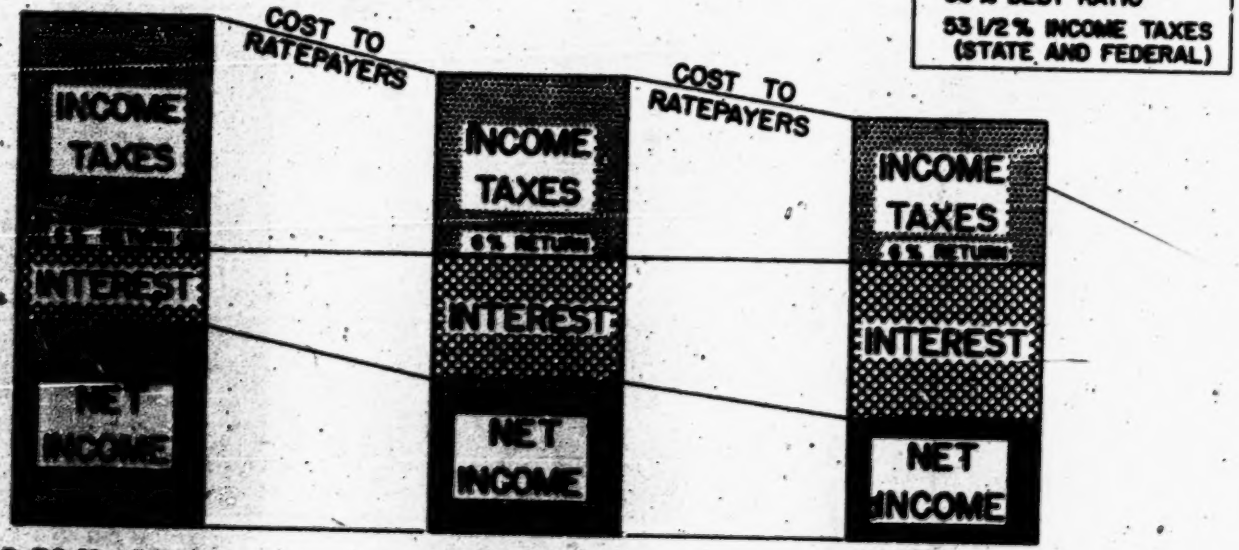
TENNESSEE GAS TRANSMISSION COMPANY
EARNINGS AND COST COMPARISONS

Column 1 Particulars	(2) 1950	(3) 1959	(4) Index (Column 3 ÷ Column 2)
Average cost of contract purchases @ 15.025 psia (twelve months ended December 1950, per books - twelve months ended July 31, 1959 as adjusted)	5.16¢	18.24¢	353%
Cost of capital - yield on Moody's A Rated Utility Bonds (September 1950 yield - July 1959 yield)	2.80%	4.88%	174%
Cost of capital - First Mortgage Pipeline Bonds (TGT 3% bonds due in 1970 sold 9/15/50 - TGT 5-1/4% bonds due in 1979 sold 7/29/59)	2.94%	5.27%	179%
Earnings on common equity of Tennessee Gas Transmission Company produced by 6% overall rate of return based on 12/31/50 capitalization and 6% overall rate of return based on 10/31/59 capitalization	15.54%	11.06%	71%
Earnings on common equity of Tennessee Gas Transmission Company produced by 6% overall rate of return based on 12/31/50 capitalization and 7% overall rate of return based on 10/31/59 capitalization	15.54%	15.10%	97%

TENNESSEE GAS TRANSMISSION COMPANY

RETURN AND INCOME TAX COST
RETURN LIMITED TO 6%

BASIS
$1,000,000 RATE BASE
63% DEBT RATIO
53 1/2% INCOME TAXES (STATE AND FEDERAL)



	2.59% DEBT	4.22% DEBT (HISTORICAL COST)	5.27% DEBT (CURRENT COST)
COST TO RATEPAYERS	$110,259	$98,445	$90,833
INCOME TAXES	50,259	38,445	30,833
RETURN	$60,000	$60,000	$60,000
INTEREST	16,317	26,586	33,201
NET TO STOCKHOLDERS	$43,683	$33,414	$26,799

(2231)

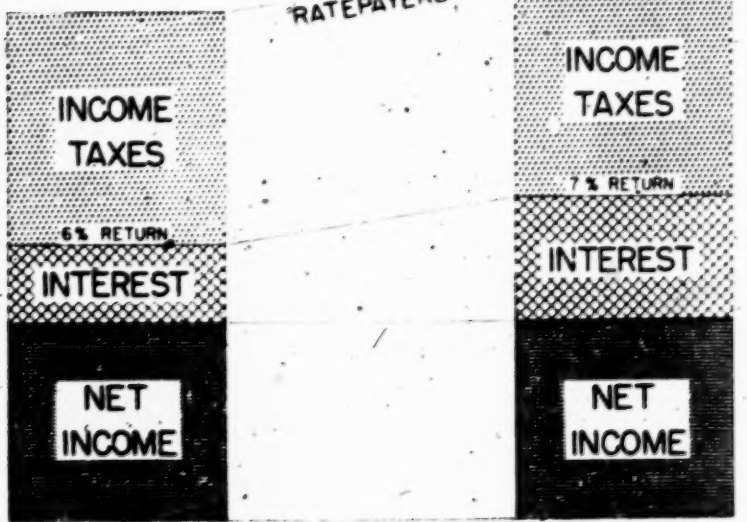
(20032)

[redacted] GAS TRANSMISSION COMPANY
EFFECT OF CHANGE IN INCOME COST OF BORROWED AND STOCKHOLDER
WITH RETURN LIMITED TO SIX PER CENT

Line No.	Column 1 Particulars	(2) Reference	(3) Historical Cost of Debt at 5.00%	(4) Cost of Debt at 6.00%	(5) Current Cost of Debt at 7.00%
1	CAPITAL COMPONENTS:				
2	Rate Base		$ 1,000,000	$ 1,000,000	$ 1,000,000
3	Total Debt (6%)		600,000	600,000	600,000
4	EFFECT OF CHANGE IN INTEREST COST:				
5	Return	6% of Line 2	$ 60,000	$ 60,000	$ 60,000
6	Interest	Line 3 x Rate	30,000	36,000	42,000
7	Net Income (46.5% of taxable income)	Line 5 - Line 6	$ 30,000	$ 24,000	$ 18,000
8	Federal and state income taxes (53.5% of taxable income)	53.5/46.5 x Line 7	$ 34,516	$ 27,613	$ 20,710
9	Cost to ratepayer	Line 5 + Line 8	$ 94,516	$ 87,613	$ 80,710

TENNESSEE GAS TRANSMISSION COMPANY

RETURN AND INCOME TAX COST
(NET INCOME MAINTAINED)



BASIS
$1,000,000 RATE BASE
63% DEBT RATIO
53 1/2% INCOME TAXES
(STATE AND FEDERAL)

	2.59% DEBT	4.22% DEBT (HISTORICAL COST)	
COST TO RATEPAYERS	$110,259	$120,528	(Increase $10,269)
INCOME TAXES	50,259	50,259	
RETURN	$ 60,000	$ 70,269	(Increase $10,269)
INTEREST	16,317	26,586	
NET TO STOCKHOLDERS	$ 43,683	$ 43,683	

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(2233)

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TENNESSEE GAS TRANSMISSION COMPANY
EFFECT OF CHANGE IN INTEREST COST ON RATEPAYER AND STOCKHOLDER
NET INCOME MAINTAINED

Line No.	Column 1 Particulars	(2) Reference	(3) Historical Cost of Debt at 2.59%	(4) Historical Cost of Debt at 4.22%
1	CONSTANT CONDITIONS:			
2	Rate base		$ 1,000,000	$ 1,000,000
3	Total debt (63%)		630,000	630,000
4	EFFECT OF CHANGE IN INTEREST COST:			
5	Net income (46.5% of taxable income)	Exhibit 13, Page 11	$ 43,683	$ 43,683
6	Interest	Line 3 x Rate	16,317	26,586
7	Return	Line 5 / Line 6	$ 60,000	$ 70,269
8	Federal and state income taxes (53.5% of taxable income)	53.5/46.5 x Line 5	50,259	50,259
9	Cost to ratepayer	Line 7 / Line 8	$ 110,259	$ 120,528

TENNESSEE GAS TRANSMISSION COMPANY
COMPUTATION OF PER CENT RETURN
ON COMMON STOCK ALLOWED
OR CLAIMED IN RATE CASES

Line No.	Column 1 Particulars	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
		September 30, 1946 (G-606)			April 30, 1951 (G-1741)			June 30, 1952 (G-2052)			June 30, 1953 (G-2252)		
		Capital Ratios	Cost	Return	Capital Ratios	Cost	Return	Capital Ratios	Cost	Return	Capital Ratios	Cost	Return
1	Long-term debt	59.11%	2.59%	1.53%	63.42%	2.99%	1.90%	64.20%	3.24%	2.08%	64.84%	3.39%	2.20%
2	Preferred stock	13.14	3.86	0.51	13.94	4.39	0.61	15.68	4.67	0.73	13.22	4.67	0.62
3	Common equity	27.75	14.27	3.96	22.64	15.42	3.49	20.12	15.85	3.19	21.94	14.49	3.18
4	Return allowed or claimed			6.00%			6.00%			6.00%			6.00%
5													

Line No.	Particulars	August 31, 1954 (G-5259) Capital Ratios	Cost	Return	July 31, 1959 (G-19983) Capital Ratios	Cost	Return	October 31, 1959 Capital Ratios	Cost	Return
6	Long-term debt	65.35%	3.53%	2.31%	61.47%	4.22%	2.59%	61.22%	4.23%	2.59%
7	Preferred stock	14.85	4.92	0.73	11.67	4.88	0.57	11.70	4.88	0.57
8	Common equity	19.80	14.95	2.96	26.86(1)	14.30	3.84	27.08(1)	14.18	3.84
9	Return allowed or claimed			6.00%			7.00%			7.00%
10										
11	NOTE:									
12	(1) Includes 4.50% series convertible second preferred stock.									

TENNESSEE GAS TRANSMISSION COMPANY

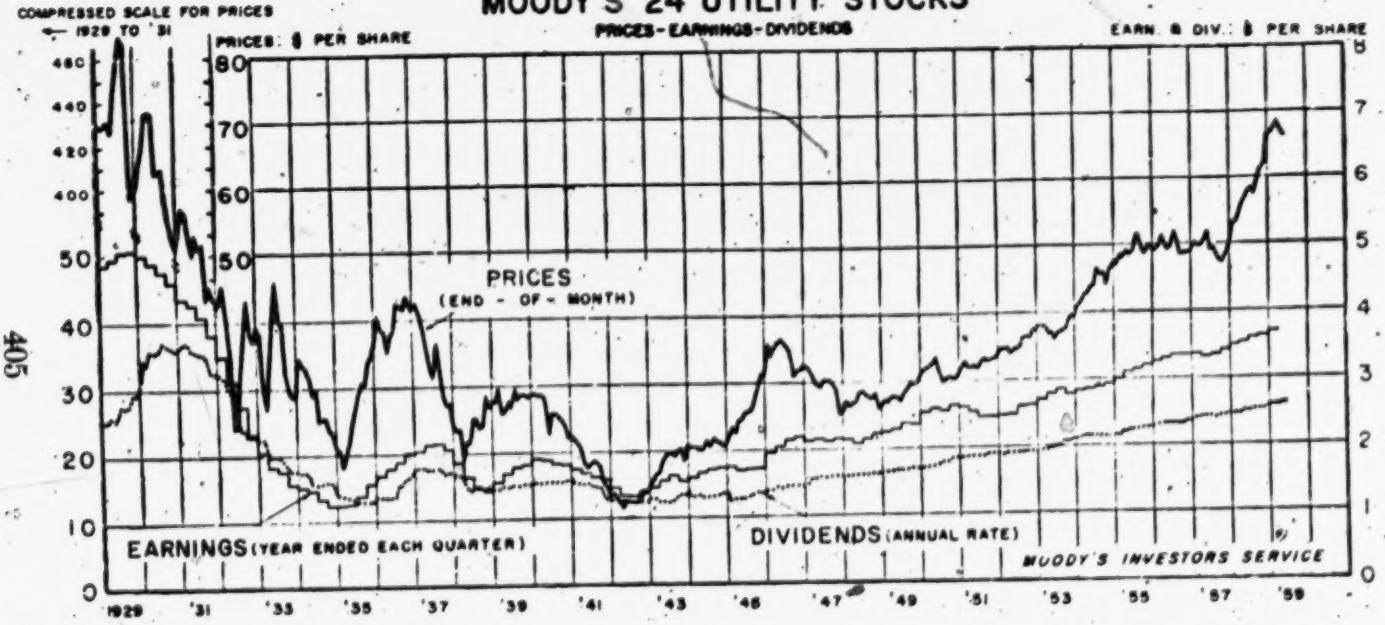
MOODY'S 24 UTILITY COMMON STOCKS

Year	Average Price Per Share	Earnings Per Share	Dividends Per Share	E. P. R.	Yield %	Pay-out
1958	$57.96	$3.63	$2.50	6.26%	4.33%	69%
1957	49.42	3.41	2.43	6.90	4.92	71
1956	49.62	3.35	2.32	6.75	4.68	69
1955	49.24	3.21	2.21	6.52	4.50	69
1954	44.30	2.94	2.13	6.64	4.81	72
1953	37.80	2.78	2.01	7.35	5.33	72
1952	35.48	2.62	1.91	7.38	5.39	73
1951	32.55	2.44	1.88	7.50	5.77	77
1950	31.23	2.62	1.76	8.39	5.66	67
1949	28.37	2.36	1.66	8.32	5.86	70
1948	27.34	2.22	1.60	8.12	5.85	72
1947	29.53	2.16	1.56	7.31	5.32	72
1946	34.05	2.19	1.43	6.43	4.23	65
1945	26.29	1.72	1.30	6.54	4.99	76
1944	20.90	1.75	1.31	8.37	6.28	75
1943	18.87	1.55	1.28	8.21	6.85	83
1942	12.92	1.40	1.26	10.84	9.76	90
1941	18.16	1.59	1.44	8.76	8.02	91
1940	25.64	1.81	1.54	7.06	6.07	85
1939	28.02	1.82	1.48	6.50	5.30	81
1938	24.27	1.42	1.50	5.85	6.27	106
1937	33.08	2.06	1.74	6.23	5.40	84
1936	40.28	2.01	1.48	4.99	3.67	74
1935	27.20	1.54	1.32	5.66	5.12	86
1934	27.84	1.22	1.60	4.38	5.85	131
1933	34.37	1.56	1.95	4.54	5.81	125
1932	36.40	2.30	2.63	5.32	7.52	114
1931	69.80	3.80	3.47	5.44	5.20	91
1930	107.67	4.59	3.55	4.26	3.45	77
1929	133.20	5.07	2.71	3.81	2.10	53

SOURCE: Moody's Public Utilities Manual

TENNESSEE GAS TRANSMISSION COMPANY

MOODY'S 24 UTILITY STOCKS



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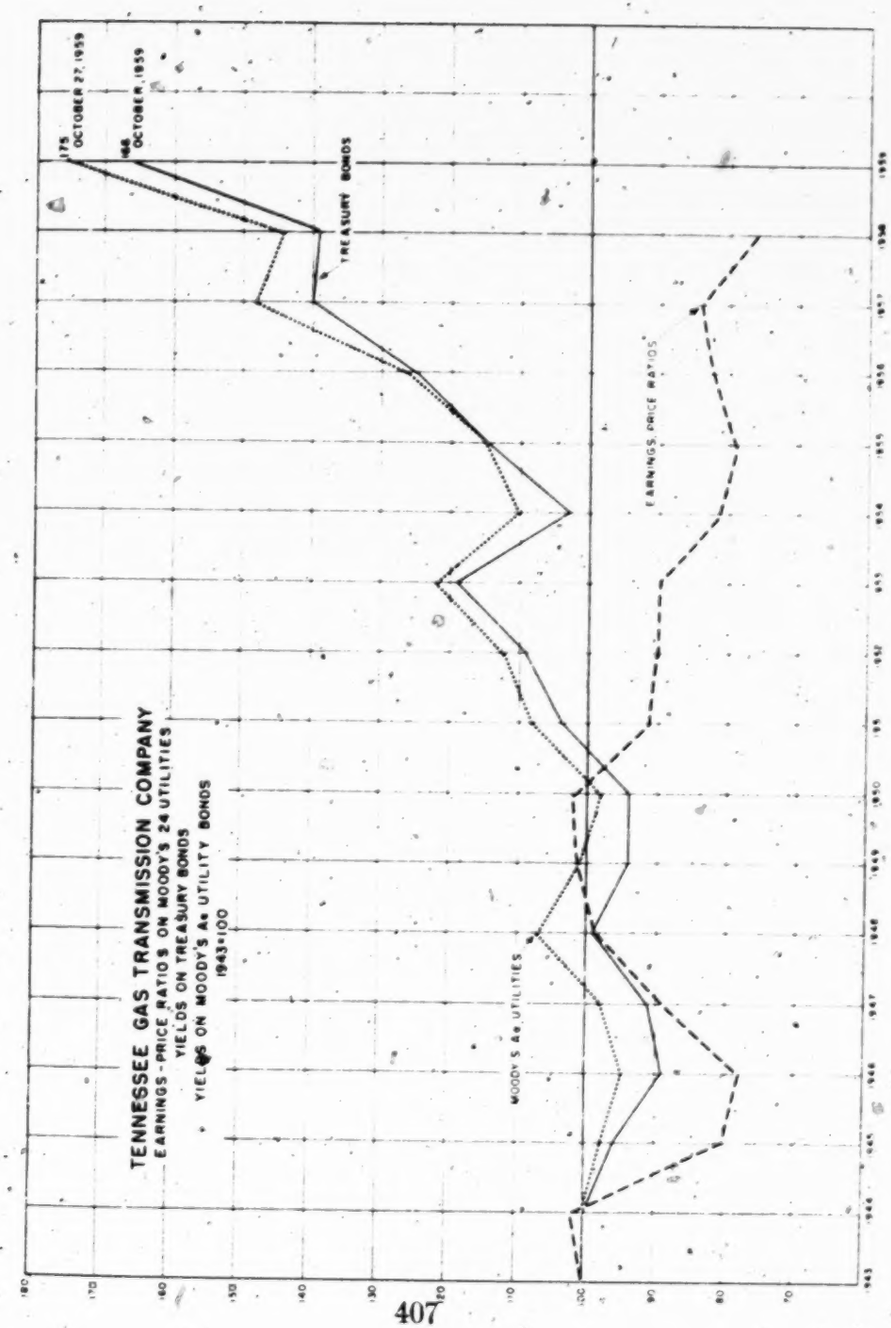
TENNESSEE GAS TRANSMISSION COMPANY

MOODY'S LIST OF STOCKS USED IN 24 UTILITIES AVERAGES

Baltimore Gas & Electric Co.
Boston Edison Co.
Carolina Power & Light Co.
Central Hudson Gas & Electric Corp.
Central Maine Power Co.
Cincinnati Gas & Electric Co.
Cleveland Electric Illuminating Co.
Commonwealth Edison Co.
Connecticut Light & Power Co.
Consolidated Edison Co. (N. Y.) Inc.
Dayton Power & Light Co.
Delaware Power & Light Co.
Detroit Edison Co.
Florida Power Corp.
Houston Lighting & Power Co.
Idaho Power Co.
Indianapolis Power & Light Co.
Pacific Gas & Electric Co.
Pennsylvania Power & Light Co.
Philadelphia Electric Co.
Public Service Co. of Colorado
Southern California Edison Co.
Tampa Electric Co.
Utah Power & Light Co.



TENNESSEE GAS TRANSMISSION COMPANY
COMPARISON OF EARNINGS - PRICE RATIOS
WITH BOND YIELDS

	U. S. Treasury Bonds		Moody's Aa Utilities		Moody's 24 Utilities	
	Yields	Index Number	Yields	Index Number	E. P. R.	Index Number
1943	2.47	100	2.73	100	8.21	100
1944	2.48	100	2.72	100	8.37	102
1945	2.37	96	2.67	98	6.54	80
1946	2.19	89	2.58	95	6.43	78
1947	2.25	91	2.67	98	7.31	89
1948	2.44	99	2.92	107	8.12	99
1949	2.32	94	2.76	101	8.32	101
1950	2.32	94	2.68	98	8.39	102
1951	2.57	104	2.95	108	7.50	91
1952	2.68	109	3.05	112	7.38	90
1953	2.93	119	3.32	122	7.35	90
1954	2.55	103	3.00	110	6.64	81
1955	2.84	115	3.13	115	6.52	79
1956	3.08	125	3.43	126	6.75	82
1957	3.47	140	4.03	148	6.90	84
1958	3.43	139	3.92	144	6.26	76
Oct. 1959	4.11	166	-	-		
Oct. 27, 1959	-	-	4.79	175		

TENNESSEE GAS TRANSMISSION COMPANY
RATE OF RETURN
AS OF OCTOBER 31, 1959

Line No.	Column 1 Particulars	(2) Amount	(3) Percent	(4) Rate	(5) Return Element
1	Long-term debt	$ 702,191,000	61.23%	4.23%	2.59%
2	First preferred stock	90,177,900	7.86	4.89	0.38
3	Second preferred stock	44,000,000	3.84	4.88	0.19
4	Common equity	310,570,921 (1)	27.08	14.28	3.86
5	Overall	$1,146,939,821	100.00%		7.00%
6	NOTE: (1) Includes 4.50% series convertible second preferred stock.				

TENNESSEE GAS TRANSMISSION COMPANY
COMPUTATION OF PER CENT RETURN ON COMMON EQUITY
ESTIMATED AS OF SEPTEMBER 30, 1960

Column	(2)	(3)	(4)	(5)
Particulars	Amount Outstanding	Capital Ratios	Cost	Return
Long-term debt	$ 707,906,000	56.49%	4.35%	2.46%
First preferred stock	$ 85,300,000	7.13%	4.89%	0.35%
4.72% Second preferred stock	$ 44,000,000	3.51%	4.88%	0.17%
5.00% Second preferred stock	29,517,800	2.36	5.17	0.12
Total second preferred stock	$ 73,517,800	5.87%	5.00%	0.29%
Common equity	$ 382,343,623(1)	30.51%	12.78%	3.90%
Total capitalization	$1,253,067,423	100.00%		7.00%

NOTE: (1) Includes 4.50% series convertible second preferred stock.

TENNESSEE GAS TRANSMISSION COMPANY
FPC RATE CASES
RETURNS ON COMMON EQUITY - ADJUSTED

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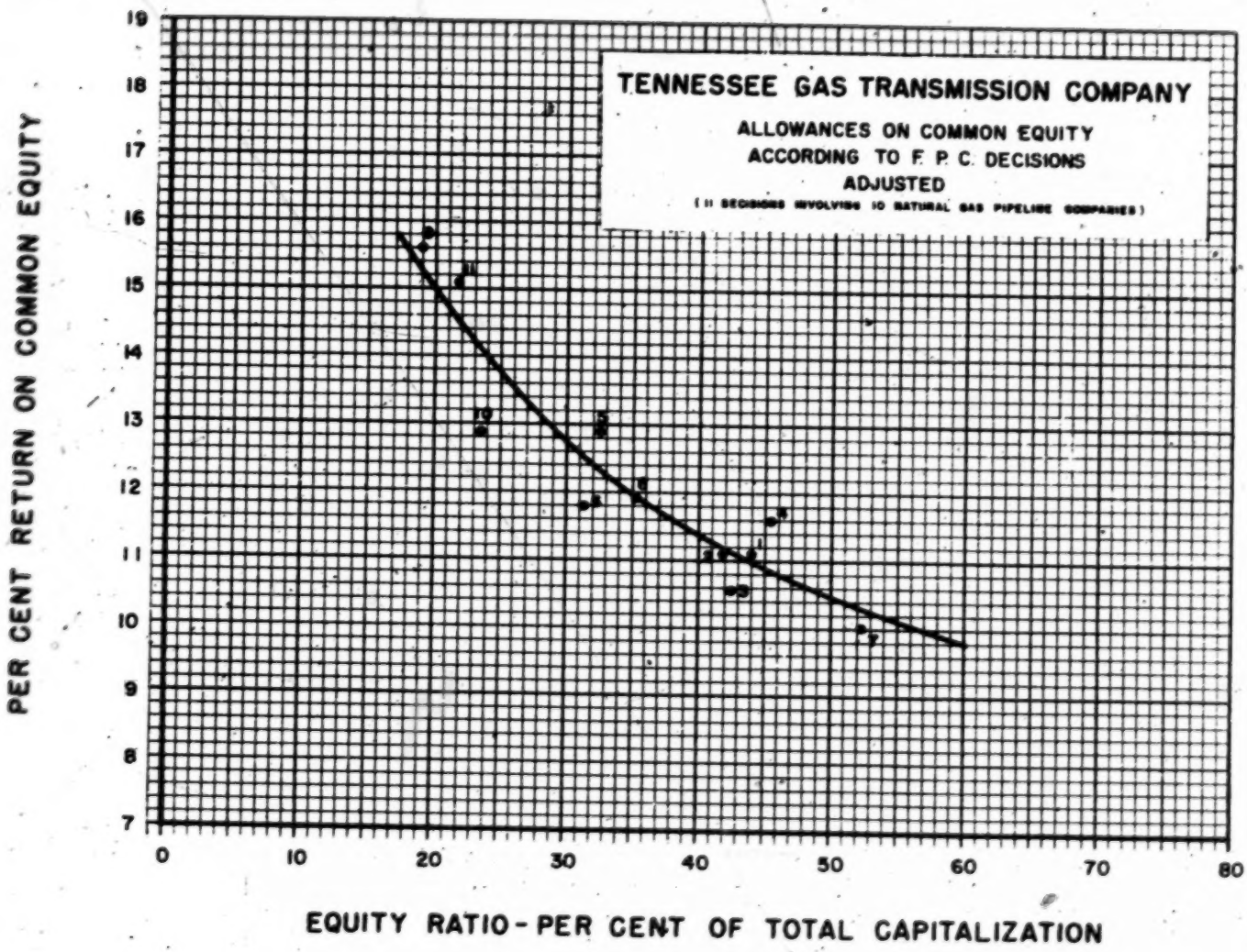
Line No.	Column 1 Citation	(2) Company	(3) Year of Balance Sheet Data	(4) Equity Ratio	(5) Allowed on Equity	(6) Annual Average Yield on Moody's Aaa Utility Bonds	(7) Increase in Yield to 1959 (4.49% - Column 6)	(8) Allowance on Equity Adjusted for Increases in Pure Cost of Money (Column 5 + Column 7)
1	11 FPC 132	Northern Natural Gas Company	1950	44 %	9.25%	2.62%	1.87%	11.12%
2	11 FPC 298	Mississippi River Fuel Corporation	1951	42	9.50	2.88	1.61	11.11
3	11 FPC 339	Colorado Interstate Gas Company	1951	42.5	8.95	2.88	1.61	10.56
4	12 FPC 271	United Fuel Gas Company	1952	45.5	10.11	2.99	1.50	11.61
5	OP. No. 269	Panhandle Eastern Pipe Line Company	1952	32.6	11.41	2.99	1.50	12.91
6	OP. No. 275	Michigan-Wisconsin Pipe Line Company	1952	31.5	10.3	2.99	1.50	11.80
7	14 FPC 522	Natural Gas Pipeline Company of America	1953	52.5	9.0	3.24	1.25	10.25
8	14 FPC 385	United Gas Pipe Line Company	1953	35.4	10.68	3.24	1.25	11.93
9	OP. No. 278	El Paso Natural Gas Company	1953	19.0	14.4	3.24	1.25	15.65
10	19 FPC 1012	Colorado Interstate Gas Company	1957	23.6	12.29	3.96	0.53	12.82
11	18 FPC 439	Tennessee Gas Transmission Company	1955	21.8	13.71	3.09	1.40	15.11

(2243)


TENNESSEE GAS TRANSMISSION COMPANY
ALLOWANCES ON COMMON EQUITY
ACCORDING TO F. P. C. DECISIONS
ADJUSTED
(11 DECISIONS INVOLVING 10 NATURAL GAS PIPELINE COMPANIES)
PER CENT RETURN ON COMMON EQUITY
EQUITY RATIO - PER CENT OF TOTAL CAPITALIZATION
19
18
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Docket No. G-

Docket No. G-19983
Witness: Katzenbach

TENNESSEE GAS TRANSMISSION COMPANY

CAPITAL RATIOS
at Selected Balance Sheet Dates

Line		Sept. 30, 1946 (G-606) Capital Ratios	Cost	Return	April 30, 1951 (G-1741) Capital Ratios	Cost	Return	June 30, 1952 (G-2052) Capital Ratios	Cost	Return
1	Long-Term Debt	59.11%	2.59%	1.53%	63.42%	2.99%	1.90%	64.20%	3.24%	2.08%
2	Preferred Stock	13.14	3.86	0.51	13.94	4.39	0.61	15.68	4.67	0.73
3	Common Equity	27.75	14.27	3.96	22.64	15.42	3.49	20.12	15.85	3.19
4	Return Allowed			6.00%			6.00%			6.00%

Line		June 30, 1953 (G-2252) Capital Ratios	Cost	Return	March 31, 1954 (G-2434) Capital Ratios	Cost	Return	August 31, 1954 (G-5259) Capital Ratios	Cost	Return
5	Long-Term Debt	64.84%	3.39%	2.20%	65.64%	3.52%	2.31%	65.35%	3.53%	2.31%
6	Preferred Stock	13.22	4.67	0.62	13.84	4.86	0.67	14.85	4.92	0.73
7	Common Equity	21.94	14.49	3.18	20.52	14.73	3.02	19.80	14.95	2.96
8	Return Allowed			6.00%			6.00%			6.00%

Line		October 31,1956(G-11980) Capital Ratios	Cost	Return	July 31, 1958 (G-17166) Capital Ratios	Cost	Return	July 31, 1959 (G-19983) Capital Ratios	Cost	Return
9	Long-Term Debt	63.86%	3.68%	2.35%	61.72%	4.01%	2.47%	61.47%	4.22%	2.59%
10	Preferred Stock	10.60	4.87	0.52	9.03	4.88	0.44	7.87	4.88	0.38
11	4.72% Second Preferred Stock	--	--	--	--	--	--	3.80	4.88	0.19
12	Common Equity	25.54(1)	14.60	3.73	29.25(1)	13.30	3.89	26.86(1)	14.30	3.84
13	Return Allowed of Claimed			6.60%			6.80%			7.00%

14 Note: (1) Includes all Convertible Second Preferred Stock except 4.72% Series.

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Hearing Exhibit No. 14 (2246)

Page

Docket No. G-19983

Witness: Katzenbach

(2247)

Tennessee Gas Transmission Company
Computation of Coverage Ratios
for Interest on Long Term Debt

Line	(1) Balance Sheet Date	(2) Capital Ratio Long Term Debt	(3) Cost of Long Term Debt	(4) Return Element	(5) Interest 6%	(6) 6.6%	(7) Coverage Ratio 6.8%	(8) 7%
1	September 30, 1946	59.11%	2.59	1.53	3.92	..	..	..
2	April 30, 1951	63.42	2.99	1.90	3.16	..	..	..
3	June 30, 1952	64.20	3.24	2.08	2.88	..	..	..
4	June 30, 1953	64.84	3.39	2.20	2.73	..	..	..
5	March 31, 1954	65.64	3.52	2.31	2.60	..	..	..
6	August 31, 1954	65.35	3.53	2.31	2.60	..	..	..
7	October 31, 1956	63.86	3.68	2.35	(2.55)	2.81	..	..
8	July 31, 1958	61.72	4.01	2.47	(2.43)	..	2.75	..
9	July 31, 1959	61.47	4.22	2.59	(2.31)	..	..	2.70

Docket No. G-19983

Witness: Katzenbach

Tennessee Gas Transmission Company
Computation of Coverage Ratios
for Interest on Long Term Debt

(Based on Average Long Term Debt Ratio of 63.29% 1946-1959)

Line	(1) Balance Sheet Date	(2) Cost of Long Term Debt	(3) Return Element	(4)	(5)	(6)	(7)
				Interest Coverage Ratio			
				6%	6.6%	6.8%	7.0%
1	September 30, 1946	2.59%	1.64%	3.66	..	..	..
2	April 30, 1951	2.99	1.89	3.17	..	..	..
3	June 30, 1952	3.24	2.05	2.93	..	..	..
4	June 30, 1953	3.39	2.15	2.79	..	..	..
5	March 31, 1954	3.52	2.23	2.69	..	..	..
6	August 31, 1954	3.53	2.23	2.69	..	..	..
7	October 31, 1956	3.68	2.33	(2.57)	2.83	..	..
8	July 31, 1958	4.01	2.54	(2.36)	..	2.68	..
9	July 31, 1959	4.22	2.67	(2.25)	..	..	2.62

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(2248)

Docket No. G-19983

Witness: Katzenbach

FINANCIAL AND MARKET RATIOS
of Certain Public Utility Companies

	(1) Common Equity Capital 12/31/57 (000)	(2) Common Equity Capital 12/31/58 (000)	(3) Average Common Equity Capital (000)	(4) Net Inc. for Com. 1958 (000)	(5) % Return on Avg. Common Equity Capital	(6) Price 4/1/59	(7) Price 12/17/59	(8) Net Earns. Per Share 1958	(9) P/E Ratio Price 4/1/59	(10) P/E Ratio Price 12/17/59	(11) E/P Ratio Price 4/1/59	(12) E/P Ratio Price 12/17/59	(13) Common Equity as % Total Average Capital	(14) Ind. Divd. at 4/1/59	(15) Divd. Yield	(16) Divd. Payout % 1958 Earns.
GROWTH STOCKS																
Arizona Public Service	$ 44,523	$ 52,842	$ 48,683	$ 5,863	12.0%	40 1/2	37 1/8	$1.88	21.5x	19.7x	4.6%	5.1%	30.4%	$1.20	3.8%	63.8%
Central Louisiana Electric	18,550	23,719	21,134	2,785	13.2	47	46 5/8	2.21	21.3	21.1	4.7	4.7	31.6	1.80	3.8	81.4
Central & South West	196,921	205,617	201,269	26,184	13.0	64 1/2	63 1/2	2.54	25.4	25.0	3.9	4.0	36.9	1.80	2.8	70.9
Florida Power & Light	142,251	182,432	162,342	23,158	14.3	46 3/4*	52 3/4	1.76*	26.6	30.0	3.8	3.3	43.7	0.82*	1.8	46.6
Gulf States Utilities	80,208	94,442	87,325	12,242	14.0	32 *	30 1/4	1.29*	24.9	23.4	4.0	4.3	32.1	0.90*	2.8	69.8
Houston Lighting & Power	131,499	140,516	136,008	19,818	14.6	70	68 3/8	2.94	23.8	23.3	4.2	4.3	41.8	1.60	2.3	54.4
Oklahoma Gas & Electric	71,183	70,914	71,049	9,515	13.4	32	30 1/2	1.45	22.1	21.0	4.5	4.8	31.7	1.00	3.1	69.0
South Carolina Elec. & Gas	59,312	72,750	66,031	7,610	11.5	35 1/4	35 3/8	1.87	18.9	18.9	5.3	5.3	34.9	1.30	3.7	69.5
Texas Utilities	237,863	275,642	256,753	34,306	13.4	69	69 1/2	2.73	25.3	25.5	4.0	3.9	40.0	1.76	2.6	64.5
Virginia Electric & Power	196,014	209,807	202,911	23,537	11.6	37 7/8	38 3/4	1.66	22.8	23.3	4.4	4.3	37.8	1.10	2.9	66.3
Average					13.1%						4.3%	4.4%	36.1%		2.9%	65.6%
GROWTH & INCOME STOCKS																
Baltimore Gas & Electric	$168,529	$172,624	$170,577	$16,646	9.8%	24 1/4*	26 1/8	$1.20*	20.2x	21.8x	4.9%	4.6%	44.4%	$0.90*	3.7%	75.0%
Central Illinois Pub. Svce.	64,667	67,733	66,200	8,884	13.4	43 3/4	43 3/4	2.56	17.1	17.1	5.9	5.9	37.9	1.76	4.0	68.8
Cleveland Electric Illum.	167,286	178,376	172,831	17,526	10.1	52 1/4	48 1/4	2.60	20.1	18.6	5.0	5.4	48.9	1.60	3.1	61.5
Columbus & So. Ohio Electric	61,474	62,585	62,030	5,353	8.6	36 1/4	41 1/8	2.02	17.9	20.4	5.6	4.9	31.1	1.60	4.4	79.2
Illinois Power	115,921	119,132	117,527	13,455	11.4	41 1/2	43 7/8	2.10	19.8	20.9	5.1	4.8	35.7	1.50	3.6	71.4
Kansas Gas & Electric	37,553	39,659	38,606	5,423	14.0	44 1/2	45 3/4	2.52	17.7	18.2	5.7	5.5	30.8	1.48	3.3	58.7
N.Y. State Electric & Gas	108,560	116,214	112,387	13,024	11.6	27 1/4*	26 1/2	1.86*	14.6	14.2	6.9	7.0	36.0	1.10*	4.0	59.1
No. Indiana Public Service	80,067	102,149	91,108	11,556	12.7	49 1/2	51 3/4	2.77	17.9	18.7	5.6	5.4	36.1	2.00	4.0	72.2
Pacific Gas & Electric	654,094	732,432	693,263	66,974	9.7	63 3/4	64 1/2	3.74	17.6	17.2	5.7	5.8	34.4	2.60	4.0	69.5
Average					11.3%						5.6%	5.5%	37.3%		3.8%	68.4%
INCOME STOCKS																
Cincinnati Gas & Electric	$100,075	$115,298	$107,687	$14,214	13.2%	34 3/4	32	$1.85	18.8x	17.3x	5.3%	5.8%	39.1%	$1.50	4.3%	81.1%
Consolidated Edison of N.Y.	655,243	729,574	692,408	55,780	8.1	62 3/4	59	3.74	16.8	15.8	6.0	6.3	39.2	2.80	4.5	74.9
Kansas City Power & Light	75,972	78,729	77,351	8,218	10.6	52 3/4	47 1/4	3.05	17.3	15.5	5.8	6.5	36.1	2.20	4.2	72.1
Public Service Elec. & Gas	303,864	341,162	322,513	27,609	8.6	42 1/2	36 5/8	2.26	18.8	16.2	5.3	6.2	30.9	1.80	4.2	79.6
Northern States Power	152,613	150,144	151,379	18,518	12.2	24 1/4	23 5/8	1.30	18.7	18.2	5.4	5.5	32.7	1.10	4.5	84.6
West Penn Electric	154,993	168,970	161,882	20,269	12.5	37	36 1/8	2.25	16.4	16.1	6.1	6.2	33.0	1.60	4.3	71.1
Average					10.9%						5.7%	6.1%	35.2%		4.3%	77.2%

* Adjusted for 2 -for-1 stock split.
+ Adjusted for 2.1-for-1 stock split.
Source: Annual Reports; Moody's Investors Service.

Docket No. G-19983

Witness: Katzenbach

RATE OF RETURN CALCULATIONS - ELECTRIC UTILITY INDUSTRY

(Dollar Amounts Expressed in Millions)

Line		(1) 1958	(2) 1957	(3) 1956	(4) 1955	(5) 1954	(6) 1953	(7) 1952	(8) 1951	(9) 1950	(10) 1949	(11) 1948
1	Total Capital & Surplus	$16,685	$15,557	$14,621	$13,753	$13,012	$12,119	$11,396	$10,310	$ 9,613	$ 8,808	$ 8,001
2	Preferred Capital Stock	4,023	3,774	3,687	3,462	3,281	3,084	2,897	2,731	2,575	2,392	2,179
3	Common Equity	12,662	11,783	10,934	10,291	9,731	9,035	8,499	7,579	7,038	6,416	5,822
4	Total Long Term Debt	18,579	17,051	15,231	14,330	13,322	12,040	10,809	9,994	9,189	8,572	7,719
5	Total Capitalization	35,264	32,608	29,852	28,083	26,334	24,159	22,205	20,3[illegible]	18,802	17,380	15,720
6	Average Common Equity	12,223	11,359	10,613	10,011	9,383	8,767	8,039	7,308	6,727	6,119	
7	Average Total Capitalization	33,936	31,230	28,968	27,209	25,247	23,182	21,254	19,553	18,091	16,550	
8	Gross Income	2,074	1,916	1,808	1,683	1,526	1,369	1,266	1,122	1,101	1,022	
9	Net Income	1,519	1,413	1,332	1,244	1,134	1,030	947	814	822	757	
10	Preferred Dividend Appropriations	178	168	160	151	144	138	129	119	111	103	
11	Net for Common	1,341	1,245	1,172	1,093	990	892	818	695	711	654	
12	Gross Income as % of Average Total Capitalization	6.11%	6.14%	6.24%	6.19%	6.04%	5.91%	5.96%	5.74%	6.09%	6.18%	
13	Net for Common as % of Average Common Equity	10.97%	10.96%	11.04%	10.92%	10.55%	10.17%	10.17%	9.52%	10.57%	10.69%	
14	Average Common Equity % of Total Capitalization	36.0%	36.4%	36.6%	36.8%	37.2%	37.8%	38.0%	37.4%	37.2%	37.0%	

Source: The amounts are taken from and the ratios are based upon the composite balance sheets and income accounts of "Privately Owned Class A and Class B Electric Utilities in the United States", compiled and published by the Federal Power Commission.

2259

Hearing Exhibit No. 18

THE PLACE OF NATURAL GAS IN THE NATION'S ECONOMY, AND OF ITS SECURITIES IN THE TRUST PORTFOLIO

By

Gardiner Symonds
Chairman and President
Tennessee Gas Transmission Company

Before the
Forty-first Mid-Winter Trust Conference
Trust Division, American Bankers Association
New York City
February 10, 1960

2260

THE PLACE OF NATURAL GAS IN THE NATION'S ECONOMY AND OF ITS SECURITIES IN THE TRUST PORTFOLIO

I— Natural Gas in the Nation's Economy

One of the least understood but most important facts of today, in my opinion, is the part played in our lives and our economy by the nation's three basic sources of fuel energy.

Almost 40% of all the annual energy consumption in the world occurs in the United States, although we have only 6% of the population of the globe and 7% of its land. It is well-known that we in this country enjoy the world's highest standard of living. It is little known that this results from the huge supply of fuel energy available, and the skill of our engineers and technicians in putting it to use.

(2260)

Machines, powered by fossil fuels either directly (or indirectly, by creating electricity, for example) do over 95% of the work done in our nation—work which in equivalent hand labor would require 80 times as many people as are now alive on earth.

Our fossil fuels, so called because of their origin, are three in number.

Coal was the first to be utilized. It helped usher in America's industrial age, powering steam-driven machinery that industrialized the United States faster than any other country in history. Until recent years it fueled our railroads, opening up our country for settlement and providing transportation for people, goods and raw material to all parts of the nation.

Oil became known to industry with the Drake Well in 1859. It became available in volume after Spindletop in 1901. Fueling the internal combustion engine, it put America first on auto wheels. And in this century, it put a good many of us on airplane wings. It led to our modern highway system. Possibly more than any one substance, it changed the American way of life.

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Natural Gas once was the unwanted ugly duckling of fuels, a stepchild of oil. Huge quantities of it were piped away from oil wells and as a nuisance were wasted in fiery flares which burned day and night. Technological advances in metallurgy and welding made big, long-distance pipelines possible. Then the ugly duckling became a swan, the fuel preferred over any other and piped everywhere large concentrations of population exist. Its growth and expansion have become one of the great industrial success stories of our generation.

Natural gas is now ranked as the fifth industry in the nation in gross assets. It probably has grown faster than any other major industry in the past 20 years.

Its growth has been based on that of the transmission lines—such as Tennessee Gas Transmission Company, with which I am associated and which, incidentally, is one of the wholesale suppliers of gas to New York; and another supplier of this city, Transcontinental Gas Pipeline Company. Another example is El Paso Natural, a major natural gas wholesaler to California.

Since 1944, when the first Tennessee Gas pipeline commenced operations, the natural gas industry has tripled, doubling in the last 10 years. I am glad to be able to say that our growth since 1944 has been four times that of the industry, since we now transport 12½ times as much gas through our system as we could or did through that first pipeline.

And what of our two other major fuels in those periods? Oil, since 1944, has enjoyed more than a 50% growth, of which 40% has occurred in the past 10 years. Coal is down 37% from 1944, most of which also has occurred in the past 10 years.

In the 12 months of calendar 1959, it is estimated that natural gas consumption rose between 9 and 10%. This was about twice the 5% increase registered by oil. Coal, meantime, just about held even with 1958 both in BTU's produced and consumed.

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But since the other two fuels were increasing their volume of heat units or BTU's, coal declined in its competitive position. Our preliminary figures indicate approxi-

mately these figures for the 1959 contribution to over-all fuel usage:

Oil,	43% of consumption;	38% of production
Gas,	32% of consumption;	33% of production
Coal,	25% of consumption;	29% of production
	100%	100%

The place of natural gas as we enter 1960, then, is that of the second most utilized of the nation's three great fuels, which together not only provide the basic energy for our industrial might, but also the power for our modern-day appliances which make life more comfortable, convenient and free of hand labor than ever before here or elsewhere.

But the progress of natural gas to today's important position not been free of troubles or problems, nor will it be in the future. Let's look at some industry developments and problems.

Regulation is one of the industry's problems. Not so much the fact of regulation, for the industry has grown during regulation; some would say, despite it. But in all fairness I think it has helped us in the long-lines part of the industry to keep our growth orderly and sound.

But the amount of regulation, the complexity of it, the time lag between applications and rulings, all add up to something that takes a lot of industry thought, time and money, which means added costs to consumers. The Federal Power Commission shows awareness of most of its problems. But many of them stem from the Commission's task—starting with 1954—of regulating producers' gas prices in the field. And *that* problem they definitely have not solved.

Opinions about regulation vary widely, as these two public statements made about the same time recently will prove:

First, a congressman from a gas-importing and consuming state made a speech at a FPC hearing claiming the FPC should be investigated by Congress for not preventing more effectively the rise in producers' prices of gas in the field.

Second, an oil industry spokesman in a gas producing and exporting state issued a statement contending that in producers' rate cases before the FPC, gas is not being allocated a large enough part of the cost of drilling for oil and gas, i.e., that gas-field prices are being kept too low. He predicted that this would reduce producers' incentive to find gas, that reserves would decline and consumers would suffer.

In other words, one man said not enough regulation is going on, the other said too much, or perhaps the wrong kind.

The year 1960 should see several developments in gas regulation. The FPC will rule in the Phillips Case, that 1954 Supreme Court decision which put producers under regulation for the first time. The Commission now is studying Examiner Zwerdling's recommended decision, which in general would prescribe a public utility type cost of service formula.

No matter what the FPC rules, it seems certain to be appealed.

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The Third Circuit Court of Appeals decision in the Transco-Consolidated Edison transportation case is important to the industry. The FPC had denied a certificate. The Court reversed and directed a certificate be issued, and the FPC now plans to appeal.

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If the court is upheld, it will strengthen the ability of gas pipelines to maintain high load factor operations by selling or transporting valley gas for industrial use. Such sales make for the most efficient operation of a pipeline system, at the lowest MCF-mile transportation cost.

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The Court reversal was based on the position that the FPC had no right to assert authority over end-use of gas, as they did in deciding the case.

* * * *

Also this year will see an urge for government regulation of the end-use of gas as the real goal of the controversial drive of the coal industry for what they call a government fuels policy. It appears to be an attempt to achieve by regulation or legislation an advantage over the other two fuels which coal has been unable to gain in a free market.

Secretary of the Interior Seaton has said conversely that consumption of fuels should continue to be determined by such forces as relative costs at specific locations, efficiency of use, dependability of supply, cleanliness, convenience and ease of control.

* * *

As to a *natural gas bill* to free producers from regulation, the chance for passage in this election year is nonexistent.

Ownership of the tidelands is before the Supreme Court for a decision in 1960. For such companies as ours, which is drilling in the tidelands, settlement of the matter once and for all would simplify and facilitate business procedures. The ownership issue does not stop development, however.

For many gas companies, including ours, the most serious and important phase of regulation affecting our business is that of gas sales rates. And in that field, it is the problem of rate of return that is crucial. The annual cost of debt capital to us and all other companies regulated as utilities has risen steadily over the past several years. At the same time a broad improvement has occurred in the general position of the U. S. saver and investor, so that recently individuals have had the opportunity to take their dollars out of their savings accounts and get

2265

5% on traditionally the most conservative investment of all, government bonds.

At such a time, I cannot overemphasize to you and to the Federal Power Commission that increases in the cost of both debt and equity capital—not merely costs projected for future expansion, but costs actually experienced—*must* be recognized. And the recognition should be in the form of a compensating upward adjustment in rate of return.

Otherwise the increased debt cost comes directly out of the pocket of the security holders. As to the common stock, that is easy, because it is a net deduction. But it also affects greatly the debt securities of the gas companies, inasmuch as it again reduces the coverages they enjoy, which reduces their quality, which in turn reduces their price—as well as the price of the common stock, if earnings are withheld from it. Thus if the higher cost of money is not recognized by the Federal Power Commission, it must come out of the gas industry security holders as a group. Such inequitable treatment of one group of investors cannot be enforced successfully by regulatory commissions when investors in general are being paid premiums to encourage savings and create capital funds.

And in the case of the interstate gas companies, we are confident the Federal Power Commission will face up to the problem and that compensatory rates of return will be forthcoming to maintain investor confidence and continue the tradition of adequately meeting service.

Reserves

In view of the rapid and continuing expansion of the industry, an adequate supply of gas is vital. So let's look at the gas reserve picture for a moment.

The joint committee on reserves of the American Gas Association and American Petroleum Institute reports that as of December 31, 1958, proved recoverable reserves of the United States were 254 trillion cubic feet. Based on production in that year of about 11½ trillion, the ratio of reserves to production is 22. New

figures, as of Dec. 31, 1959, will be available in a couple of months and no great change is anticipated.

But more important than the ratio is the fact that reserve growth has substantially outdistanced production growth over the years. Since 1950, for example, production has increased about a half-trillion each year on the average. But reserves have *increased* an average of eight trillion per year since 1950; that is, over and above production. So we are definitely keeping ahead. Incidentally, since 1950 the nation's reserves increased 36%, while ours at Tennessee Gas increased nearly twice as fast, or about 63%.

Two other points about reserves: First, we have been talking only about U. S. reserves. In addition, there are substantial volumes of gas in Canada, and to a degree in Mexico in excess of the long-range needs of those countries.

These reserves can cross international boundaries and find markets in this country in the manner in which the proposed pipeline of Midwestern Gas Transmission Company, one of the subsidiaries of Tennessee Gas, will utilize a Canadian gas supply for deliveries to companies and communities in North Dakota, Minnesota and Wisconsin. And Tennessee as has another application on file before the FPC to buy Canadian as at Niagara Falls.

Second, the figures we have been discussing are proved reserves, that is, the reserves that have been found and their extent determined. In addition, we in the industry get considerable comfort from the predictions of experts whose business it is to make long-range studies on what probably will occur in the future, in other words, ultimate reserve figures.

Oil and gas economists for Eastern banks have estimated the total U. S. gas reserves including the 254 trillion of the present and all gas to be discovered in the future, will amount to some 1,200 trillion cubic feet. An American Gas Association

official's projection is some 1,400 trillion, and a U. S. Geological Survey fuels branch chief has gone as high as 1,700 trillion for the ultimate gas reserves of this nation.

In that connection, it is interesting to recall that in 1919 a man who was perhaps the most generally accepetd authority of his day on gas reserves, a Mr. E. W. Shaw, estimated that the total recoverable reserves already known at that time and to be discovered in the future might equal 15 trillion cubic feet. Today the U. S. is producing almost that much every year.

Later estimates have consistently increased. But in each case it was the same story. Every pronouncement has been

shown up as pessimistic in a few years by the technological advances and by the drillers' success in finding more and larger gas pools than anyone dreamed of.

So, I believe the gas reserve situation forms a solid base for the industry expansion of today and for projected future growth.

II—Gas Securities in the Trust Portfolio

Leaving now the general subject of gas in our economy, I would like to talk for a few minutes about what the natural gas industry offers the buyer of securities for trust funds.

Let's go back into not too ancient history a little. During the depression, 25 or 30 years ago, it wasn't easy to get money for natural gas pipelines. Many of you will remember that Toledo Gas Company sold five-year 8 per cent's at 90 to raise money in those days, which shows what the investment banking fraternity thought then of a good gas distributing property.

But even in those tough financial times, the vitality of pipelines was apparent and some of the mgot into business mostly on a limited basis. Starting from the Panhandle and Hugoton fields of Texas, Oklahoma and Kansas, such pipelines as Colorado Interstate, Northern Natural and Panhandle Eastern began to push across the country. El Paso also headed from West Texas toward the smelters of Arizona.

and down on the Gulf Coast the remains of the Moody-Seagraves empire were tied together to form the United Gas Corporation.

Along came the war. But both before and during the war, a lot of things happened that made the job of natural

gas transmission more feasible. Reserves continued to mount in the Southwest as oil men drilling for oil found gas, sometimes a lot of gas with no oil. Inspired by the war, the demand for gas mounted rapidly in the Appalachian area, which was the Ruhr of America, as well as in the East, Northeast, Middle West and Northwest. A great need existed for pipelines.

We built our first Tennessee Gas pipeline and started operating it in 1944, to satisfy the war-generated needs for fuel in the Appalachian area. Next year, the war ended. Men and materials soon became available, and the gas industry took off—whoosh—like one of those rockets we are reading about these days. And it has never stopped.

The establishment of all those pipelines which followed ours out of the Gulf Coast—the great growth of the industry in the 15 years which have followed—were due to several things. Greater financial stability had arrived for the industry. Proration of oil and effective conservation of gas were the order of the day. Banks and investors had greater appreciation of the value of reserves in place, and of long-term contracts with producers at the starting point of the pipeline and with distribution companies at the other end. So we in the industry acquired the ability to bank at reasonable costs. And so we grew. As I said earlier in my remarks, the industry tripled.

In my opinion, the gas industry at present, having emerged from the shadow of the Memphis Decision and making progress in solving some of its regulatory problems, is in a situation comparable to that of the electric utilities after the pressures of the T.V.A. and the Public Utility Holding Company Act were relieved.

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When I tell you that in many respects, both the bonds and stocks of gas pipelines and other divisions of the indus-

try have advantages over those of electric utilities, don't be shocked (no pun intended).

Bonds of the gas pipeline companies, for example, typically get a fast payout from approximately a 5% per annum sinking fund. The buyer of such bonds is continually getting a new look at his money. It keeps coming back to him, and he gets new opportunities to invest it on the best terms available.

I need not tell you that in an expanding economy, with a fast-growing population, a mounting Gross National Product, and what sometimes seems to be built-in inflation, that is a real advantage.

Let's take a concrete case. In 1951, Tennessee Gas sold $35 million of 3⅛% series first mortgage bonds due 1971. As of December 31, 1959, after eight years, we have retired $12¼ million of those bonds, or about 40%.

If a trust officer had bought those bonds, back eight years ago, he would have roughly 40% of his capital back by now in reinvestable form. Last July, he could have reinvested any of his returned capital in a new bond issue of our company and could have bought a 5¼% interest return for his money. Pipeline bond retirements create a sort of rolling effect on the investor's capital which is not typical of electric utility bonds.

By way of contrast, let's look at the situation of an investor who bought 3⅛% electric utility bonds back eight years ago. Either he has to hold them to full maturity—30 or 35 years usually—at the low interest rate, or sell them at a discount, thereby losing part of his original investment, in order to be able to reinvest the remainder on the more advantageous terms now current.

Debt securities at Tennessee Gas, for example, are sold typically with about a 12 or 12½-year average life. Which

of course means that if a trustee invests in such an issue, under normal operation of sinking funds he will get his money back

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at a rate equivalent to getting it back in 12 or 12⅛ years, instead of the 30 or 35 years for the electric utilities. We also have sold our senior preferred stock with a sinking fund. And sinking funds on electric preferred stock are extremely rare.

Gas pipeline companies started on a completely different investment premise from electric utilities. An electric company mortgage typically allows substitution of properties for sinking funds. The effect of the mortgage is for more and more property to be put into the trust estate against which the company can't issue new bonds.

On the other hand, in a gas transmission company the expenditure for plant is basically treated as a one-time investment. This originated partly from the fear of depletion of reserves which might lead to a stoppage of gas service some day.

Property has been made to earn its own retirement and earn it on a short-life basis. But as I have previously pointed out, our nation's gas reserves—given the economic incentive of price and located by the talent and skill of our exploration teams—have grown at a rate exceeding the use of gas. And this fear of exhaustion is a ghost which should no longer haunt the security buyer.

With this in mind, perhaps the following homely illustration—really homely, since it is based on the figurative "homes" of two men we will call Mr. Gas Pipeline and Mr. Electric—will make my point clearer.

Mr. Electric builds his home. He keeps adding rooms. He doesn't pay off any of his bonds. The mortgage holder

is satisfied, however, for he keeps getting more house as security for his mortgage, even though the house is getting older.

Mr. Gas Pipeline basically just builds his home, and adds no rooms. He makes regular annual payments on his mortgage. The size of the remaining debt decreases. The property depreciates. But the position of the debtholder is good—he gets paid off faster than the house depreciates. And, to repeat, he has money for reinvestment.

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His good position results from, among other things, the spread that develops between the net depreciated value of the pipeline property, on the one hand, and the amount of the bonds on the other. That spread is at least as great, and perhaps greater, in the gas transmission business than in the electric utility business.

Under the pressure of low rates of return adhered to by the Federal Power Commission, pipelines have initially been financed at high rates of indebtedness exceeding in many cases 70% of plant. New bonds, under mortgages generally accepted, cannot initially exceed 60% of plant additions which builds in a good margin of safety as the systems grow. In addition, as this margin grows and as pipeline bonds are retired rapidly, the ratio of mortgage bonds to net gas transmission plant continues to drop. For example, in 1954 the ratio of mortgage bonds to net transmission plant at Tennessee Gas had declined to 58%. And five years later, at the end of 1959, it had dropped still further to 53%. In other words, the ratio improves even after offsetting the original cost by appropriate depreciation charges. I am convinced you are as well off in the pipeline bond business as in the electric utility business.

To keep the record straight, I am sure you all share with me the high regard for the electric utility business which it enjoys with investors generally. Its securities have earned this standing by steady long-term performance. But through my close personal dealings with pipeline securities which have amounted to between $1 billion and $1½ billion through the last 15 years, I have become convinced that the gas industry's securities—in the words of the current breakfast food commercial—are "just a little bit better." Better, in that they give the buyer better sinking fund protection, better ability to follow trends in interest and money markets with what I am convinced is every bit of the security that inures to an investment in an electric utility.

And now let's examine gas industry equity securities for a few moments.

It has not been advertised, nor is it generally known, that equity ratios in gas companies have been increasing steadily, as a corollary to the initial financing which starts with a large debt and rapidly works itself into an equity position. This

build-up of equity values not only provides ever-growing protection to the debt holder, but also gives great investment satbility, coupled with its inherent outstanding growth incentive, to the equity holder himself.

For example, Tennessee had at the end of 1954 only 19% of its capitalization in common stock and surplus. While five years later, at the end of 1959, including convertible second preferred stock our equity had risen to over 31%. As you know, we are going to market with additional equity securities this month and it is our intention ot further strengthen our equity position to over 35% by the end of 1960.

Many gas companies have followed the trend which I have just mentioned as illustrative of the stability which the industry is building into its securities as the industry approaches maturity. Certainly the great growth in gas reserves which are being developed in the producing areas of the country; the widespread ownership of these reserves by the gas companies themselves, and a continued growth on a basis approaching 8% compounded annually, removes the fear of declining rate base as a reducer of earnings.

Further, the yields which are available on gas company stocks exceed those of electric utilities with the same growth characteristics—on a performance basis—they most closely parallel. And when markets generally become confused over the position of the highly volatile growth stocks, there is no better defense than to look to these equities in the gas business. They are able to show sustained, continued growth, rapidly improving equity ratios, and sound and increasing gas reserve positions supported both by matured contracts and by actual ownership.

Certainly in the light of the known reserve picture there is little justification in the gas business for the investment standing of the distributing companies, which cannot increase or even continue their earnings unless they are supported by the pipelines, and the lower appraisal of pipelines themselves. The pipeline firms should

enjoy a perferred position with investors over the distributing companies they serve and who serve the ultimate consumer.

In any discussion of pipeline equity securities, the first preferred stocks should not be overlooked. As you know, by fashion they carry a sinking fund and a consistently higher dividend rate, so that in those markets where return

is required by the character of the account or the needs of the beneficiary, they are desirable. These stocks, too, are being greatly upgraded by the improving equity relationships and the reduction of prior debt.

During the growth and development of pipeline companies such as Tennessee Gas over the last 15 years, it is interesting to note the acceptance by the investing public of the same range of securities sold or used by other utilities. They include first mortgage bonds, debentures, preferred stock (with sinking fund), convertible preferred stock (which has not usually been used by such utilities), and finally, common sotck itself.

While you will be sure I am prejudiced, I know of no better industry that has a combination of (one), compounded growth and, (two), approaching maturity that the gas industry is now enjoying. It remains only for us to achieve stability in a government philosophy, which any industry the size of the gas industry is bound to obtain. And when we obtain it, in my opinion, our securities will be fully as well regarded as those of other utility companies.

Certainly many factors, such as the low labor content of our business, would entitle them to be even more seriously considered in these times of high labor costs.

Conclusion

In conclusion, I have mentioned *growth* more than once in this discussion. And now I want to close on that note.

The growth factor is an important one for the investor. In the past 15 years, the industry has had it to probably a greater degree than any other major industry.

That is why it has grown to a position as the fifth largest industry in the nation in terms of plant investment.

And that growth is still continuing. The industry firmly believes it will double in the next 10 years. It spent $1.8 billion in 1959 for expansion. In 1960 it will spend $1.9 billion or a $100 million additional.

The industry is dynamic. We in it are not discouraged by problems, and refuse to lie down and play dead when new challenges arise. The inherent stability of the natural gas business is linked with an equally inherent growth incentive based on public preference and demand.

Gas has fought its way upward to a well-deserved position of prominence in the nation's fuel economy. Further progress will be no soft snap, but then neither was that of the past. I look for continued sound healthy growth—growth both actual and relative, and meaningful for the investor and for the economy, in an exciting decade ahead.

Thank you.

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EXHIBIT 2275

Value Line Survey
© Arnold Bernhard & Co., Inc.

TENNESSEE GAS TRANSM. (NYSE-TGT) MARCH 21, 1960 867

Relative timeliness in Pt. | Past Growth 100 Past Stability 85 Intervals of 5 (100—5) | Quality Grade A | Price/Earnings Ratio (10 Year Av'ge 15.5) 15.1 | Dividend Yield (10 Year Av'ge 4.7%) 4.7%

	Index	Your Weights	Efficiency
Quality (safety)	10	×	=
Performance (next 12 months)	10	×	=
Potentiality (3 to 5 years)	6	×	=
Yield (income)	6	×	=
Sum (efficiency for your portfolio)			=

Based on earns. (2.25) and divs. (1.59) est. in 12 mos. ending 3/31/61.

(Highest)

33 1/3% stock — 25% stock — 25% stock — 20% stock — 33 1/3% stock — 20% stock

RANK according to Probable Market Performance

	I Highest	II Above Average	III Average	IV Below Average	V Lowest
Next 12 months ①	✓				
To 1963-65			✓		

① Determined by the ratio of Average Price to Intrinsic Value

Next Dividend Meeting: about Apr. 15
Next Div'd Goes Ex: about May 11

	1929	1932	1937	1938	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961
Gross Revenues ▶					18.4	20.4	28.4	41.2	53.3	75.8	108.4	133.3	143.0	200.4	267.8	313.2	402.8	463.1	490	
Net Plant ▶					78.2	111.6	163.2	211.4	325.4	462.7	531.8	563.4	667.2	795.4	909.3	986.0	1093.8	1156.5		
Return on Plant ▶					6.1%	5.5%	5.0%	5.3%	5.0%	4.4%	5.5%	5.6%	5.1%	5.7%	5.7%	6.1%	6.3%	7.4%		
Debt Ratio ▶					60.9%	66.1%	65.2%	64.9%	63.9%	69.4%	68.9%	68.1%	67.5%	66.9%	64.9%	66.0%	62.0%	60.9%		
Book Value/sh. ▶					2.64	3.07	3.94	4.87	5.79	6.29	6.94	7.87	8.23	9.47	10.00	10.74	12.16	14.17		
Earnings per sh. ▶					.42	.60	.59	.69	.91	.87	1.16	1.03	1.18	1.47	1.61	1.62④	1.72④	1.93	2.20	
Div'ds per sh. ▶					--	.09	.38	.50	.62	.73	.80	.88	.88	.96	1.17	1.17③	1.34③	1.60③	1.53	
Div'd Payout ▶					6.9%	18.4%	49.3%	48.8%	52.7%	55.9%	45.2%	48.0%	48.8%	39.6%	43.1%	38.3%	37.6%	39.9%	36%	
Avg. Price/Earns ▶					11.5	8.1	11.9	13.8	13.2	15.0	13.4	14.4	13.8	16.6	15.4	15.1	17.2	17.4		
Avg. Div'd Yield ▶					--	1.9%	4.9%	4.9%	4.9%	5.0%	5.0%	5.9%	5.4%	3.9%	4.7%	4.4%	4.5%	4.3%		

CAPITAL STRUCTURE

Debt $744.7 mill. Interest $30.5 mill.

Pfd Stock $184.5 mill. Dividend $8.6 mill. 801,065 shs., 9 series 4.10%-5.25%; 209,279 shs. 4.56% conv. into 3.45 com. shs to 3-1-66; 440,000 shs. 4.72% conv. into 2.4 com. shs. to 4-1-69; 295,178 shs. 5% conv. into 2.67 com. shs. to 11-1-64, fewer thereafter. (All cumulative, all $100 par.)

Common Stock 23,259,978 shares

Calendar Year	GROSS REVENUES ($ Millions) for Quarters Ended Mar. 31	June 30	Sept. 30	Dec. 31	Full Year
1957	75.3	71.1	78.9	87.9	313.2
1958	110.9	91.1	94.1	106.7	402.8
1959	117.0	99.6	107.6	NA	463.1⑤
1960			Estimates in Notes		550

Calendar Year	EARNINGS (Per Share) for Quarters Ended Mar. 31	June 30	Sept. 30	Dec. 31	Full Year
1957	.27	.38	.28	.35	1.16
1958	.36	.38	.39	.39	1.53
1959	.42	.43	.45	.42	1.72④
1960	.47	.48	.48	NA	1.93

Average Price past 52 weeks 33 | Recent Price 34 | Intrinsic Value next 12 months 39 | Potential Value during 1963-65 45 (+32%)

Advice: Tennessee continues to represent a sound, defensive holding in a generally overvalued and uncertain stock market. The stock's high Quality Grade (A) and Stability Index (85) testify to its resistance to declines in the general market. Further, the issue ranks in Group I (Highest) for Probable Market Performance in the Next 12 Months. The estimated dividend yield of 4.7% over the next 12 months compared favorably with that afforded by all stocks on average. True, the shares' Appreciation Potentiality to 1963-65 is only moderate, but it can be considered well assured.

Current Analysis: In a manner typical of Tennessee's Chrmn. Symonds, the company took a series of rapid-fire and related actions early this year. In quick succession, directors proposed a 50% stock dividend and an increase in the cash dividend rate, reported record 1959 earnings, and - before the resultant excitement had settled - floated the new $1.65 annual dividend rate (on present shares) will probably force even more rapid conversion of the 4.50% preferred. By year end, nearly 30% of TGT's capital structure will be represented by common stock, the highest proportion in the company's history. It would appear, therefore, that the bulk of the company's financial requirements for the next year or two will require sale of only senior securities.

The additional stock will dilute share earnings somewhat, but not enough - we believe - to prevent a sharp further rise (to about $2.30) this year. It should be pointed out that more than $1.30 a share of these earnings represent revenues being collected subject to refund. However, the action of Tennessee's directors in increasing the dividend well above the level of presently "firm" earnings reflects their confidence that the bulk of pending rate increases will be approved.

Heard

TENNESSEE GAS TRANSM. (NYSE-TGT)

EXHIBIT 2275

MARCH 21, 1960

cumulative, all $100 par.)
Common Stock 23,259,978 shares

Calendar Year	REVENUES ($ Millions) for Quarters Ended Mar. 31	June 30	Sept. 30	Dec. 31	Full Year
1952	24.7	24.6	25.9	31.2	106.4
1953	31.5	33.4	32.0	36.4	133.3
1954	36.1	34.0	32.7	41.2	143.0
1955	44.1	41.2	53.3	61.8	200.4
1956	66.5	64.7	66.5	70.9	267.6
1957	75.3	71.1	76.9	87.9	313.2
1958	110.9	91.1	94.1	108.7	4[illegible]
1959	117.0	90.6	107.6	NA	483.1(3)
1960			Estimates in Prices		550

Calendar Year	EARNINGS (Per Share) for Quarters Ended Mar. 31	June 30	Sept. 30	Dec. 31	Full Year
1952	.27	.26	.26	.35	1.16
1953	.26	.26	.23	.28	1.03
1954	.22	.35	.26	.35	1.18
1955	.35	.35	.32	.47	1.47
1956	.36	.37	.38	.48	1.61
1957	.33	.30	.36(4)	.64	1.62(4)
1958	.40(4)	.29	.35	.68	1.72(4)
1959	.38	.42	.38	NA	1.93(5)
1960			Estimates in Prices		2.20

Calendar Year	DIVIDENDS PAID(1) in the three months ended Mar. 31	June 30	Sept. 30	Dec. 31	Twelve months Total
1952	.183	.183	.183	.219	.77
1953	.219	.219	.219	.219	.88
1954	.219	.219	.219	.219	.88
1955	.219	.219	.219	.219	.88
1956	.292	.292	.292	.292	1.17
1957	.292	.584(3)	.292	.292	1.46
1958	.292	.35	.35	.35	1.34
1959	.35	.35	.35	.35	1.40
1960	.35				

in the general market. Further, the issue ranks in Group I (Highest) for Probable Market Performance in the Next 12 Months. The estimated dividend yield of 4.7% over the next 12 months compared favorably with that afforded by all stocks on average. True, the shares' Appreciation Potentiality to 1963-65 is only moderate, but it can be considered well assured.

Current Analysis: In a manner typical of Tennessee's Chrmn. Symonds, the company took a series of rapid-fire and related actions early this year. In quick succession, directors proposed a 50% stock dividend and an increase in the cash dividend rate, reported record 1959 earnings, and - before the resultant excitement had settled - floated a highly successful 1.6 million share issue of new common stock. (Also typically, Mr. Symonds got the maximum mileage from the proposed dividend increase, since it will not be effective until the September payment.) In successfully raising some $53 million in new equity capital at a time when the stock market generally was well below its December high and looked weaker all the time, the company pulled quite a coup. Moreover, the highest proportion in the company's history. It would appear, therefore, that the bulk of the company's financial requirements for the next year or two will require sale of only senior securities.

The additional stock will dilute share earnings somewhat, but not enough - we believe - to prevent a sharp further rise (to about $2.20) this year. It should be pointed out that more than $1.30 a share of these earnings represent revenues being collected subject to refund. However, the action of Tennessee's directors in increasing the dividend well above the level of presently "firm" earnings reflects their confidence that the bulk of pending rate increases will be approved.

3 to 5 Year Projections: In the hypothesized 1963-65 economy (see page 8 of the Summary-Index), we project average annual revenues to $800 million, earnings to $3 a share and dividends to $2.10. Capitalized at 4.8%, consistent with past norms adjusted for trend, such results would command a price of 45 (15.5 times earnings). F.B.S.

BUSINESS: Tennessee Gas Transmission Company operates a natural gas pipe line system extending from Texas and Louisiana to New England. Also produces natural gas, crude oil, refined petroleum and extracted hydrocarbon products. Major customers: Columbia Gas System, Consolidated Natural Gas Co. Principal affiliates; Mid-Western Gas Transmission Co., Bay Petroleum Corp., Petro-Tex Chemical Corp. Since 1941-49, operating revenues have increased fifteen-fold (gas industry 300%). Has 5,500 employees, 97,500 stockholders. President, Gardiner Symonds. Inc.: Del. Address: Commerce Bldg., P. O. Box 2511, Houston, Texas.

① -Dividend payment dates: Mar. 10, June 14, Sept. 10, Dec. 14.
② -Dividends declared.
③ -Two quarterly payments.
④ -Excludes 14¢ a share in 1957, 12¢ in 1958, non-recurrent profit.
⑤ -Estimated 55% in '57, 17% in '58, 50% in 1959, considered a return of capital for tax purposes.
⑥ -Full year includes East Texas Natural; interim figures not comparable.

Above per share figures and price range adjusted for stock distributions shown on face of chart.

Log Intrinsic Value Next 12 Mos.: .630 log (.86 x Earn. + 1.60 x Div.) + 1.239

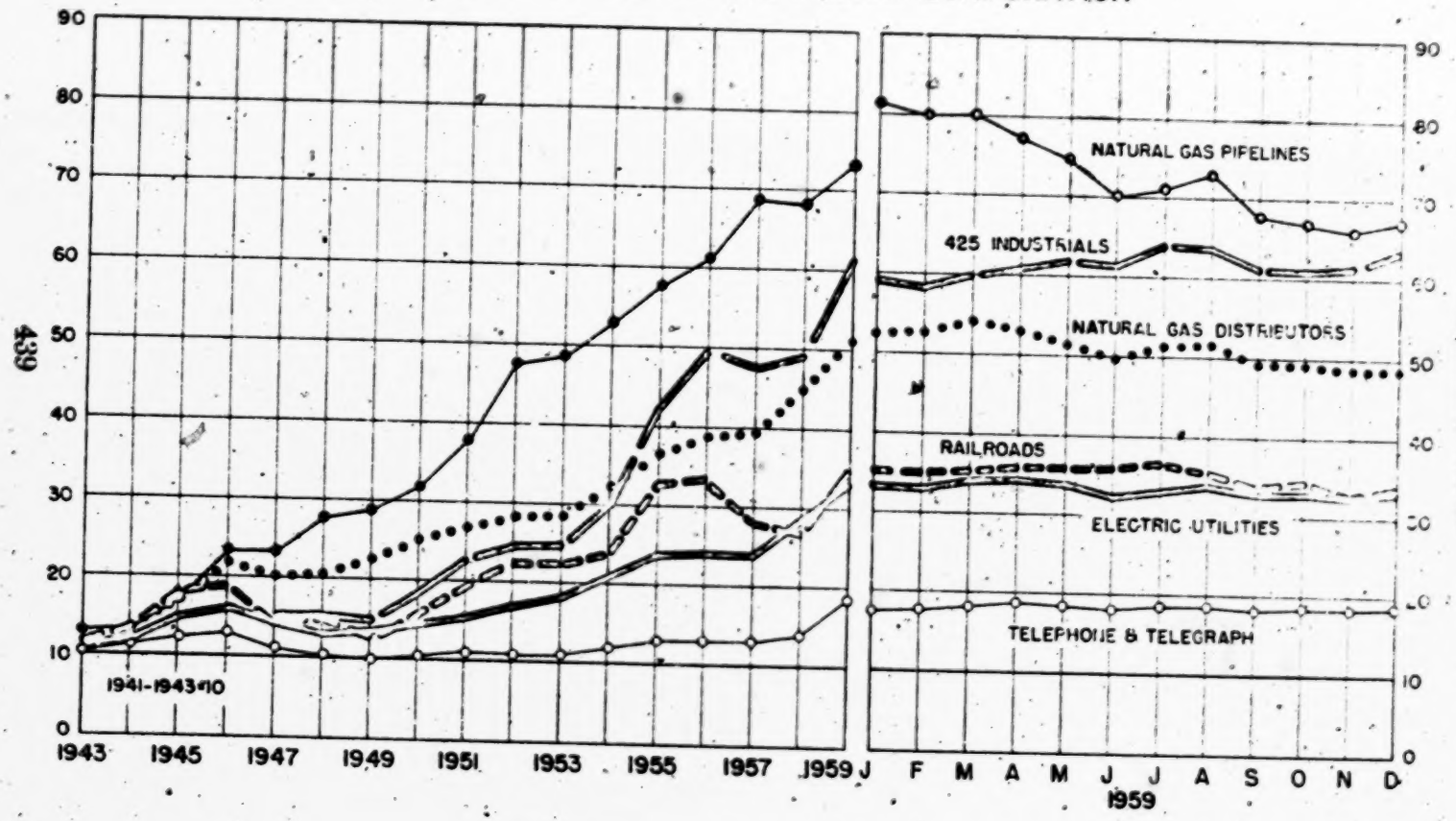
(3) Percentage of Outstanding Shares Traded Monthly.

Arnold Bernhard & Co., Inc., and/or its directors or officers, and/or its affiliates, have in the aggregate an investment exceeding 1% of the equity [illegible]

Hearing Exhibit No. 19 (2275)

SELECTED COMMON STOCK PRICE INDEXES, 1943-1959
COMPUTED BY STANDARD & POOR'S CORPORATION

EXHIBIT NO.
DOCKET NO. G-1976[illegible]
WITNESS P. SHAFFER



Hearing Exhibit No. 20

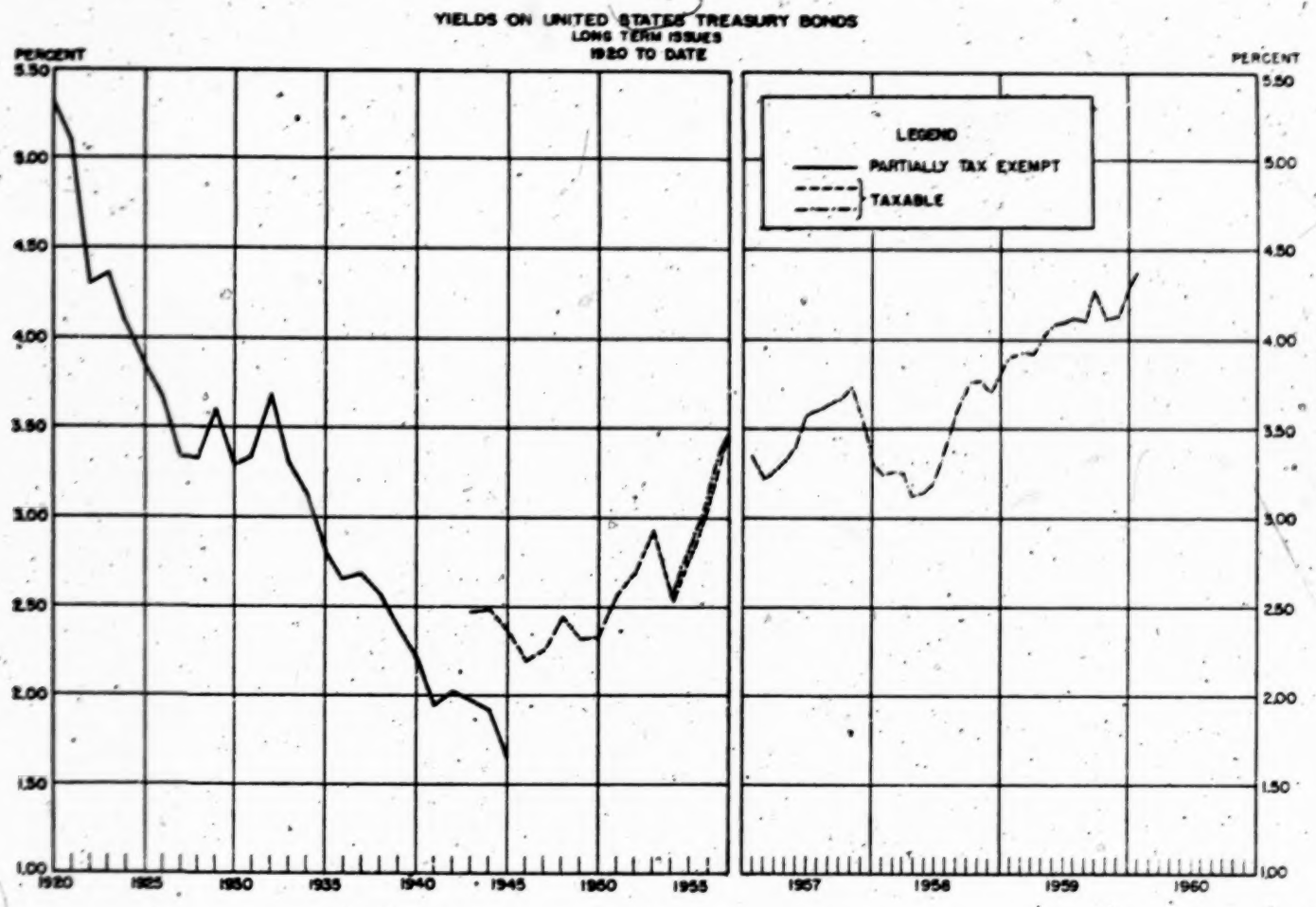
(2276)

SELECTED COMMON STOCK PRICE INDEXES, 1943 - 1959

COMPUTED BY STANDARD & POOR'S CORPORATION 1941-43 = 10

	6 Natural Gas Pipelines	425 Industrials	11 Natural Gas Distributors	25 Railroads	30 Electric Utilities	3 Telephone and Telegraph
1943	13.16	11.49	11.91	11.81	11.13	10.57
1944	12.90	12.34	13.06	13.47	12.19	11.40
1945	17.37	14.72	16.95	18.21	14.94	12.45
1946	23.56	16.48	21.93	19.09	16.32	13.18
1947	23.51	14.85	20.37	14.02	14.27	11.21
1948	27.64	15.34	20.65	15.27	12.96	10.54
1949	28.92	15.00	22.57	12.83	13.47	10.04
1950	31.97	18.33	25.01	15.53	14.72	10.67
1951	37.83	22.68	26.88	19.91	15.42	11.02
1952	47.62	24.78	28.49	22.49	17.10	11.02
53	48.51	24.84	28.59	22.60	18.15	11.17
54	53.00	30.25	32.41	23.96	21.01	12.08
1955	57.85	42.40	36.63	32.94	23.77	13.14
1956	61.23	49.80	38.81	33.65	24.03	13.14
1957	68.69	47.63	39.55	28.11	23.98	13.15
1958	68.20	49.36	45.03	27.05	28.56	14.05
1959	73.11	61.45	51.12	35.09	33.30	18.43
59						
Jan.	81.52	59.30	52.55	35.53	33.34	17.64
Feb.	79.94	58.33	52.87	35.20	33.04	17.96
Mar.	80.29	59.79	54.28	35.47	34.15	18.49
Apr.	77.48	60.92	53.12	35.94	34.24	19.03
May	74.87	62.09	51.67	36.07	33.80	18.66
June	70.27	61.25	49.81	36.02	32.26	18.29
July	71.29	64.23	51.47	36.86	33.18	18.75
Aug.	73.18	63.74	51.79	35.56	33.87	18.68
Sept.	67.99	61.21	49.31	33.78	32.91	18.23
Oct.	67.01	61.04	49.30	34.32	33.06	18.56
Nov.	66.18	61.46	48.71	32.80	32.68	18.46
Dec.	67.26	63.56	48.60	33.57	33.11	18.41
Avg.	73.11	61.45	51.12	35.09	33.30	18.43

Source: Standard & Poor's Trade & Securities Statistics.



Hearing Exhibit No. 21

(2280)

141

YIELD ON UNITED STATES TREASURY BONDS

PARTIALLY TAX EXEMPT

Year	Avg.	Year	Avg.	Year	Avg.	Year	Avg.	Year	Avg.
1920	5.32%	1925	3.86%	1930	3.29%	1935	2.79%	1940	2.21%
1921	5.09	1926	3.68	1931	3.34	1936	2.65	1941	1.95
1922	4.30	1927	3.34	1932	3.68	1937	2.68	1942	2.02
1923	4.36	1928	3.33	1933	3.31	1938	2.56	1943	1.98
1924	4.06	1929	3.60	1934	3.12	1939	2.36	1944	1.92
								1945	1.66

The yields for the period January 1920 to October 1925, are averages of yields of all outstanding partially tax exempt Government bonds due or callable after eight years. Those yields from October, 1925, to February, 1943, are based on bonds due or callable after twelve years. Averages for the two sets of bonds were identical from October, 1925 to July, 1928. In April, 1944, the series was revised beginning February, 1943, to include all outstanding partially tax exempt issues due or callable in more than 15 years. The series were discontinued after December, 1945, since subsequent to this date there were no bonds outstanding with a maturity date of over 15 years.

TAXABLE

Year	Avg.	Year	Avg.	Year	Avg.	Year	Avg.	Year	Avg.
1943	2.47%	1946	2.19%	1949	2.31%	1952	2.68%	1955	2.80%
1944	2.48	1947	2.25	1950	2.32	1953	2.93	1956	3.05
1945	2.37	1948	2.44	1951	2.57	1954	2.53	1957	3.47

The series was started in October, 1941, with average yields on taxable bonds due or callable in 12 years. Commencing with February, 1943, the series was changed to taxable bonds due or callable in 15 years. Due to the short period during which the first series were employed, that period November, 1941 to February, 1943, is eliminated in order that the data will consist of the same series. Beginning April 1, 1952, series includes all fully taxable, marketable bonds due or first callable after 12 years, through September 30, 1955, and those due or callable in 10-20 years, beginning October 1, 1955. Each new bond with a period to call or to maturity of more than the minimum was included upon date of issue and dropped when its period to call or to maturity reached the minimum. The yields are figured to call date when the issue was selling above par and to maturity date when the issue was selling below par. Monthly data are average of daily figures.

NEW SERIES

Year	Avg.	Year	Avg.	Year	Avg.
1954	2.55%	1956	3.08%	1958	3.43%
1955	2.84	1957	3.47	1959	4.07%

Month	1957	1958	1959	1960
January	3.36%	3.24%	3.90%	4.37%
February	3.22	3.26	3.92	
March	3.26	3.25	3.92	
April	3.32	3.12	4.01	
May	3.40	3.14	4.08	
June	3.58	3.19	4.09	
July	3.60	3.36	4.11	
August	3.63	3.60	4.10	
September	3.66	3.75	4.26	
October	3.73	3.96	4.11	
November	3.57	3.70	4.12	
December	3.30	3.80	4.27	
Average	3.47%	3.43%	4.07%	

This series is based on bonds maturing or callable in ten years or more. First appeared in the Federal Reserve Bulletin, January, 1958.

Source: Years 1920 to 1941 - "Banking and Monetary Statistics, (November, 1943)", pages 468-474, published by the Federal Reserve System.

Years 1942 to date "Federal Reserve Bulletin".

COMPILATION OF MOODY'S BOND YIELD AVERAGES

In the compilation of Moody's Bond Yield Averages, daily yields for each individual bond are computed on the basis of closing prices. Unweighted arithmetic averages are computed to obtain each of the series shown. The monthly series are arithmetic averages of the daily figures.

Occasional substitutions in the bond list have been made when ratings have been changed, when a bond is called, when a bond sells too far above its call price, or because of approaching maturity. Suitable adjustments (usually small), which are gradually amortized, are introduced to prevent such substitutions from impairing the comparability of the series. No convertible or other unusual issues are included and the average maturity is close to 30 years.

Only 60 bonds were used in the averages from 1920 to 1927, inclusive. From 1928 to 1933, inclusive, 120 bonds were used, no adjustment being required to connect the two series. Since 1933 it has not been possible to find a sufficient number of representative bonds for some of the Industrial and Railroad groups, and, therefore, contain a less number from time to time. However, the averages for these groups are given equal weighting in combining them with other group averages.

KEY TO MOODY'S BOND RATINGS

Moody's Ratings are an indicator of the relative investment quality of bonds. The Ratings are defined by Moody's Investors Service as follows:

Aaa

Bonds which are rated Aaa are judged to be of the best quality. They carry the smallest degree of investment risk and are generally referred to as "gilt edge." Interest payments are protected by a large or by an exceptionally stable margin and principal is secure. While the various protective elements are likely to change, such changes as can be visualized are most unlikely to impair the fundamentally strong position of such issues.

Aa

Bonds which are rated Aa are judged to be of high quality by all standards. Together with the Aaa group they comprise what are generally known as high grade bonds. They are rated lower than the best bonds because margins of protection may not be as large as in Aaa securities or fluctuation of protective elements may be of greater amplitude or there may be other elements present which make the long term risks appear somewhat larger than in Aaa securities.

A

Bonds which are rated A possess many favorable investment attributes and are to be considered as higher medium grade obligations. Factors giving security to principal and interest are considered adequate but elements may be present which suggest a susceptibility to impairment sometime in the future.

Baa

Bonds which are rated Baa are considered as lower medium grade obligations, i.e., they are neither highly protected nor poorly secured. Interest payments and principal security appear adequate for the present but certain protective elements may be lacking or may be characteristically unreliable over any great length of time. Such bonds lack outstanding investment characteristics and in fact have speculative characteristics as well.

Source: Moody's Bond Yield Averages are computed by Moody's Investors Service and are issued in their publications. The Bond Yield Averages are reproduced in Survey of Current Business, November 1937, 1938 Supplement, and March, 1939. The above figures were taken from the last named source for the period from January 1920, to January, 1939; and were taken directly from Moody's Bond Survey for the subsequent months. Definitions of Ratings were taken from Moody's Public Utilities, 1936 page vi.

MOODY'S BOND YIELD AVERAGES - ACCORDING TO INDUSTRY - 1920 TO DATE

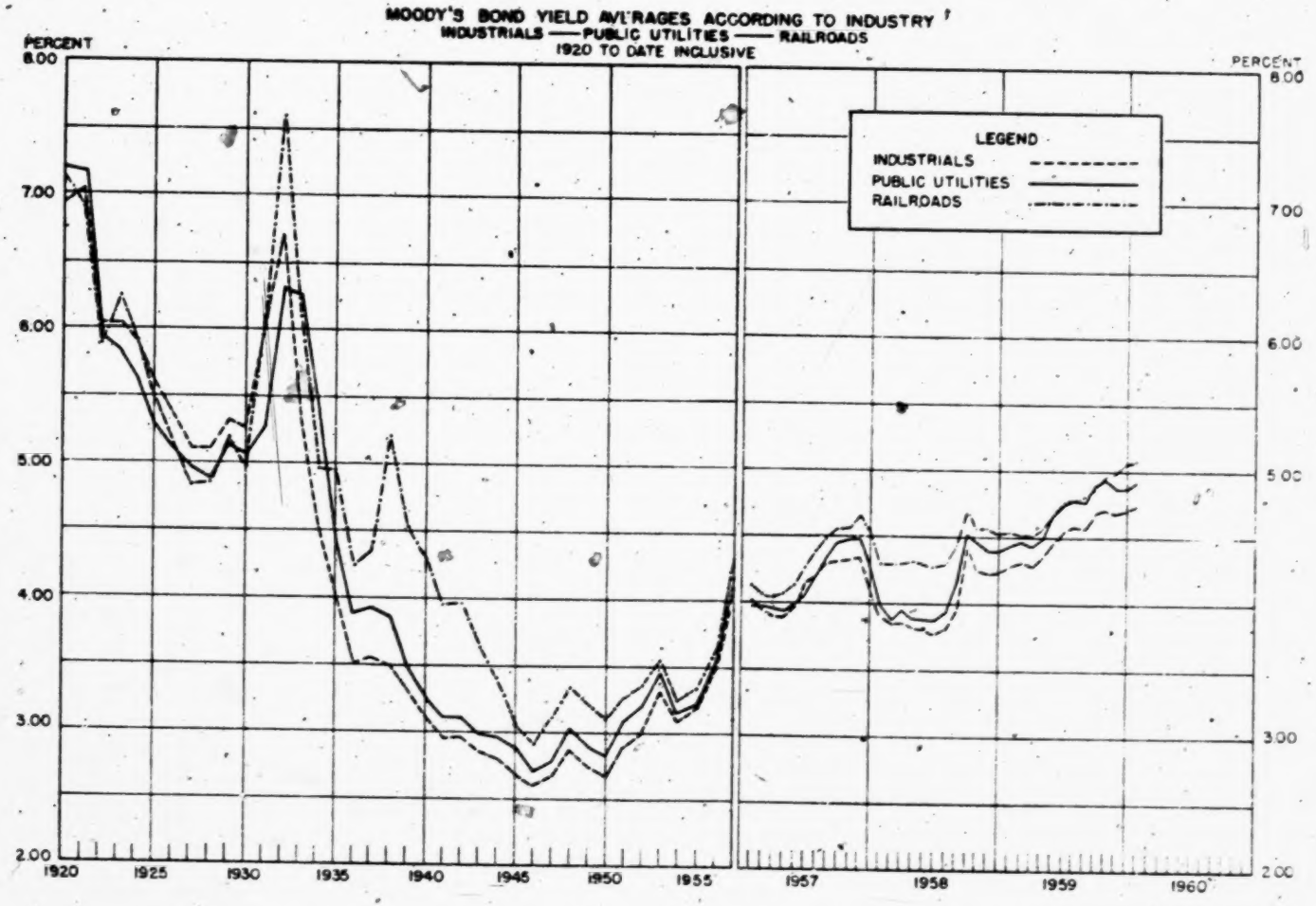
YEARLY AVERAGES

Year	Industrials	Railroads	Utilities
1920	6.94%	7.12%	7.19%
1921	7.04	6.91	7.17
1922	6.04	5.89	5.93
1923	6.04	6.24	5.94
1924	5.90	5.90	5.61
1925	5.61	5.51	5.29
1926	5.37	5.13	5.11
1927	5.10	4.83	4.96
1928	5.10	4.85	4.87
1929	5.31	5.18	5.14
1930	5.25	4.96	5.05
1931	6.08	6.09	5.27
1932	6.71	7.60	6.30
1933	5.34	6.09	6.25
1934	4.52	4.96	5.40
1935	4.02	4.95	4.43
1936	3.50	4.24	3.88
1937	3.55	4.35	3.93
1938	3.50	5.21	3.87
1939	3.30	4.53	3.48
1940	3.10	4.30	3.25
1941	2.95	3.95	3.11
1942	2.96	3.96	3.11
1943	2.85	3.64	2.99
1944	2.80	3.39	2.97
1945	2.68	3.06	2.89
1946	2.60	2.91	2.71
1947	2.67	3.11	2.78
1948	2.87	3.34	3.03
1949	2.76	3.24	2.90
1950	2.67	3.10	2.82
1951	2.89	3.26	3.09
1952	3.00	3.36	3.20
1953	3.30	3.55	3.45
1954	3.09	3.25	3.15
1955	3.19	3.34	3.22
1956	3.50	3.65	3.54
1957	4.12	4.32	4.18
1958	3.98	4.39	4.10
1959	4.51	4.75	4.70

MONTHLY AVERAGES

Year	Industrials	Railroads	Utilities
1957			
Jan.	4.02%	4.12%	3.98%
Feb.	3.94	4.06	3.97
Mar.	3.90	4.04	3.95
Apr.	3.89	4.06	3.94
May.	3.96	4.13	3.98
June	4.14	4.26	4.06
July	4.19	4.39	4.19
Aug.	4.29	4.49	4.33
Sept.	4.31	4.56	4.45
Oct.	4.32	4.57	4.48
Nov.	4.34	4.65	4.49
Dec.	4.11	4.53	4.29
Ave.	4.12%	4.32%	4.18%
1958			
Jan.	3.91%	4.30%	3.99%
Feb.	3.86	4.29	3.87
Mar.	3.86	4.30	3.95
Apr.	3.83	4.32	3.90
May	3.80	4.30	3.89
June	3.77	4.28	3.88
July	3.81	4.30	3.91
Aug.	3.94	4.42	4.16
Sept.	4.24	4.52	4.41
Oct.	4.25	4.56	4.46
Nov.	4.23	4.56	4.40
Dec.	4.24	4.52	4.39
Ave.	3.98%	4.39%	4.10%
1959			
Jan.	4.28%	4.53%	4.43%
Feb.	4.31	4.51	4.46
Mar.	4.28	4.52	4.43
Apr.	4.35	4.56	4.49
May	4.46	4.67	4.67
June	4.55	4.76	4.77
July	4.58	4.79	4.79
Aug.	4.56	4.80	4.77
Sept.	4.68	4.88	4.89
Oct.	4.70	4.96	4.95
Nov.	4.69	4.99	4.86
Dec.	4.70	5.05	4.86
Ave.	4.51%	4.79%	4.70%
1960			
Jan.	4.74%	5.08%	4.92%
Feb.	4.71	5.05	4.89

For identities of issues compising these averages see page 8.


MOODY'S BOND YIELD AVERAGES ACCORDING TO INDUSTRY
INDUSTRIALS — PUBLIC UTILITIES — RAILROADS
1920 TO DATE INCLUSIVE
PERCENT
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1920
1925
1930
1935
1940
1945
1950
1955
1957
1958
1959
1960
LEGEND
INDUSTRIALS
PUBLIC UTILITIES
RAILROADS

6

MOODY'S BOND YIELD AVERAGES OF 40 PUBLIC UTILITIES - - ACCORDING TO RATINGS - - 1920 TO DATE

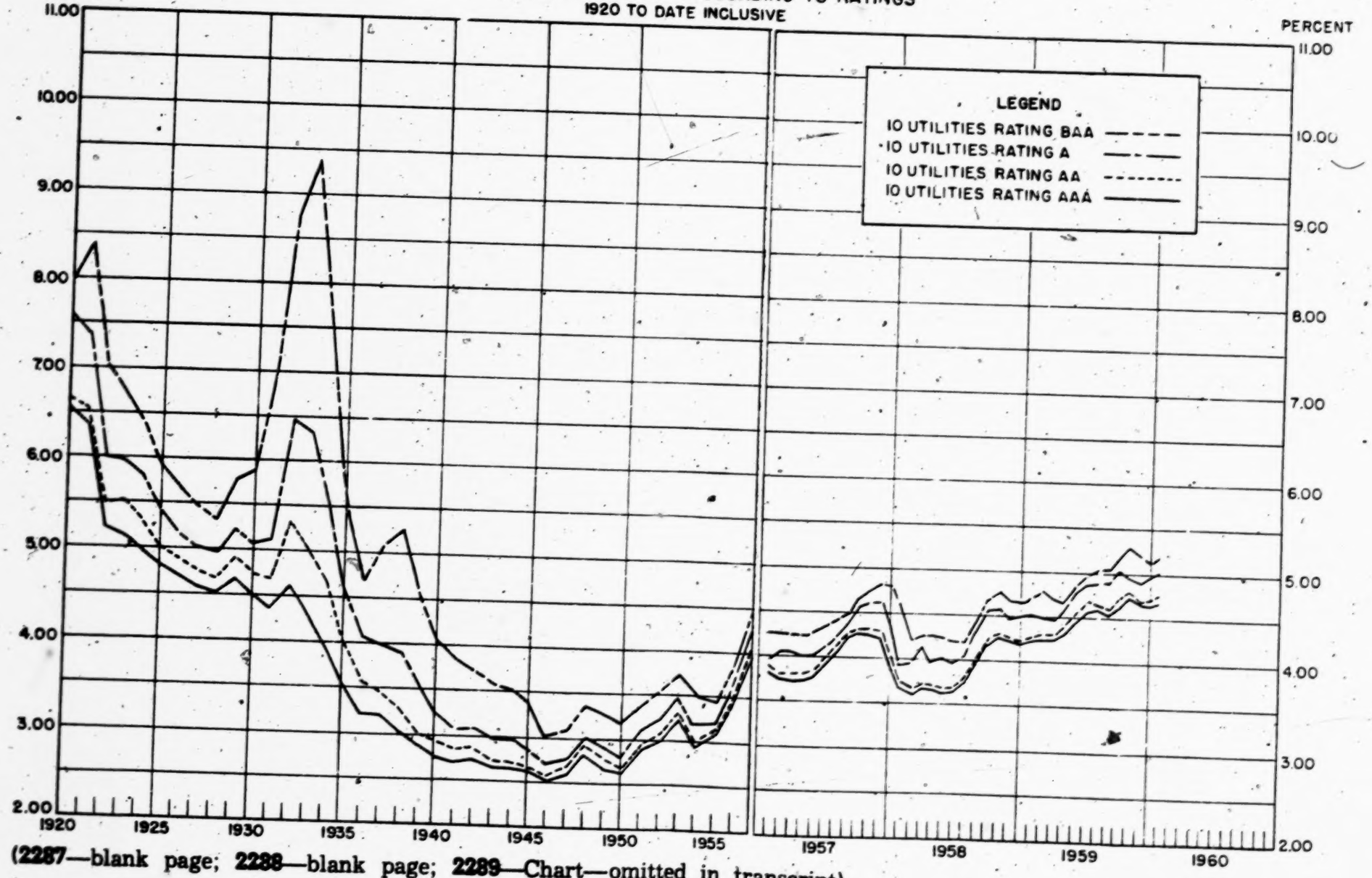
YEARLY AVERAGES

Year	10 Aaa Bonds	10 Aa Bonds	10 A Bonds	10 Baa Bonds
1920	6.53%	6.65%	7.57%	7.99%
1921	6.34	6.55	7.38	8.40
1922	5.23	5.48	6.00	7.03
1923	5.14	5.51	5.97	6.75
1924	4.96	5.30	5.80	6.38
1925	4.82	5.03	5.42	5.91
1926	4.70	4.88	5.17	5.67
1927	4.59	4.76	5.02	5.46
1928	4.51	4.68	4.95	5.33
1929	4.67	4.91	5.22	5.76
1930	4.50	4.75	5.06	5.88
1931	4.36	4.68	5.12	6.90
1932	4.61	5.32	6.46	8.78
1933	4.29	5.02	6.32	9.38
1934	3.92	4.66	5.55	7.49
1935	3.52	4.02	4.61	5.56
1936	3.21	3.57	4.08	4.67
1937	3.21	3.45	3.98	5.09
1938	3.03	3.28	3.90	5.26
1939	2.88	3.03	3.52	4.50
1940	2.77	2.92	3.24	4.05
1941	2.69	2.83	3.07	3.84
1942	2.73	2.87	3.09	3.73
1943	2.65	2.73	2.99	3.58
1944	2.65	2.72	2.97	3.52
1945	2.62	2.67	2.87	3.39
1946	2.51	2.58	2.71	3.03
1947	2.59	2.67	2.78	3.08
1948	2.81	2.92	3.02	3.36
1949	2.67	2.76	2.90	3.28
1950	2.62	2.68	2.79	3.18
1951	2.88	2.95	3.11	3.39
1952	2.99	3.05	3.24	3.53
1953	3.24	3.32	3.49	3.73
1954	2.93	3.00	3.16	3.51
1955	3.09	3.13	3.22	3.43
1956	3.39	3.43	3.56	3.78
1957	3.96	4.03	4.24	4.46
1958	3.87	3.92	4.20	4.43
1959	4.49	4.56	4.78	4.96

MONTHLY AVERAGES

Year	10 Aaa Bonds	10 Aa Bonds	10 A Bonds	10 Baa Bonds
1958				
Jan.	3.68%	3.73%	3.93%	4.60%
Feb.	3.62	3.68	3.96	4.23
Mar.	3.67	3.73	4.13	4.25
Apr.	3.66	3.72	3.95	4.25
May	3.63	3.69	4.01	4.23
June	3.64	3.70	3.99	4.20
July	3.74	3.79	4.04	4.19
Aug.	3.94	3.98	4.29	4.44
Sept.	4.17	4.24	4.55	4.69
Oct.	4.25	4.29	4.56	4.74
Nov.	4.22	4.25	4.47	4.67
Dec.	4.19	4.22	4.49	4.65
Avg.	3.87%	3.92%	4.20%	4.43%
1959				
Jan.	4.23%	4.27%	4.52%	4.71%
Feb.	4.25	4.31	4.50	4.77
Mar.	4.24	4.30	4.47	4.69
Apr.	4.31	4.40	4.56	4.68
May	4.48	4.57	4.77	4.87
June	4.56	4.67	4.86	4.97
July	4.60	4.64	4.88	5.03
Aug.	4.54	4.60	4.89	5.04
Sept.	4.62	4.72	5.03	5.17
Oct.	4.74	4.79	4.96	5.29
Nov.	4.66	4.68	4.90	5.20
Dec.	4.65	4.71	4.96	5.13
Avg.	4.49%	4.56%	4.78%	4.96%
1960				
Jan.	4.68%	4.76%	5.02%	5.20%
Feb.	4.63	4.68	5.00	5.23

MOODY'S BOND YIELD AVERAGES
OF 40 PUBLIC UTILITIES ACCORDING TO RATINGS
1920 TO DATE INCLUSIVE



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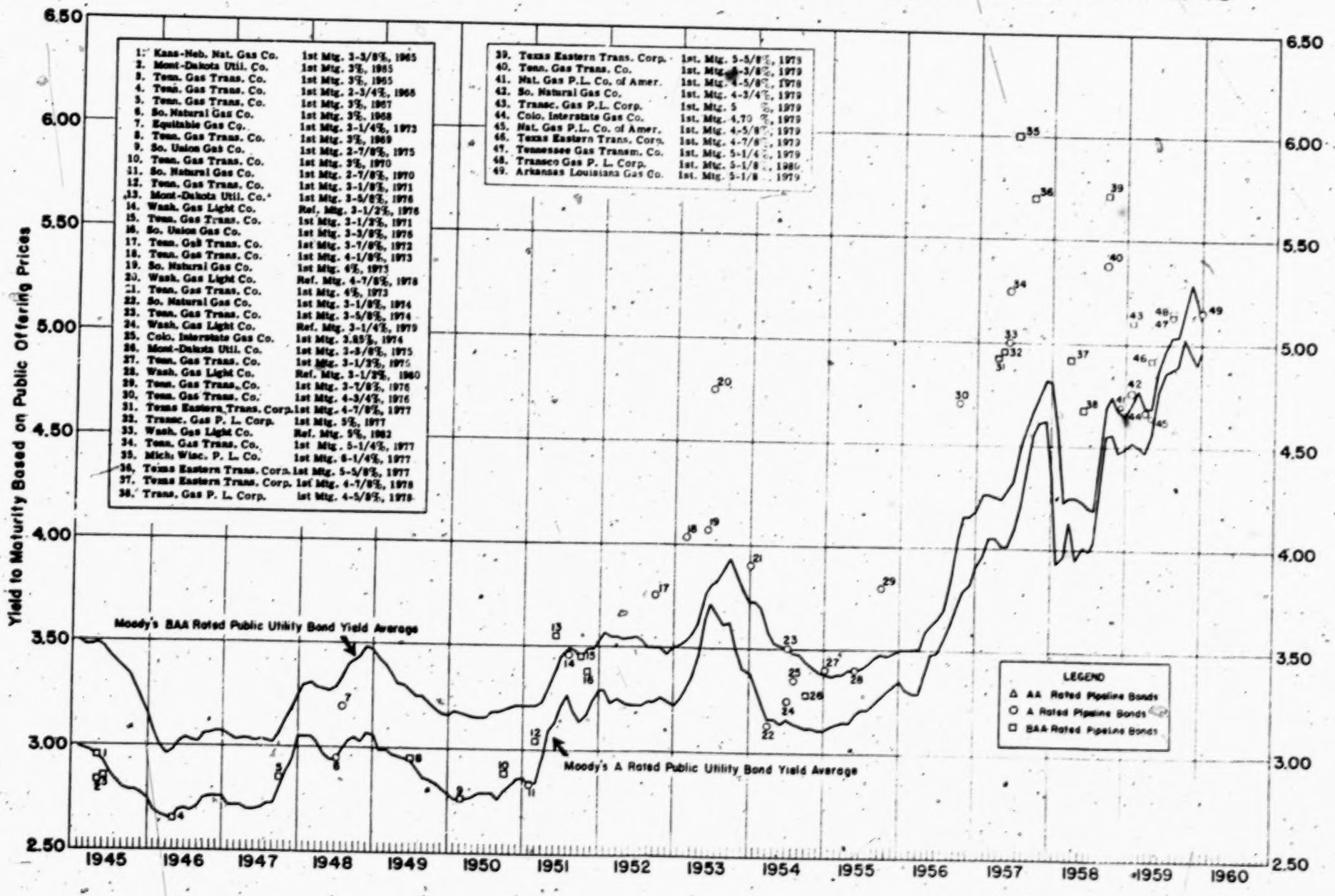
2286

PUBLIC OFFERINGS OF NATURAL GAS PIPELINE MORTGAGE BONDS FROM 1945



PRINCIPAL PUBLIC OFFERINGS OF NATURAL GAS PIPELINE COMPANY MORTGAGE BONDS SINCE JANUARY 1, 1945

No.	Company (a)	Issue (b)	Offering Date (c)	Principal Amount in Millions (d)	Moody's Rating at Offering (e)	Price to Public Amount (f)	Price to Public Yield (g)	Net Proceeds to Company Amount (h)	Net Proceeds to Company Cost (i)	Cost of Flotation % of Public Offering Amount (j)	Cost of Flotation % of Public Offering Price (k)	How Sold* (l)	Notes (m)
1.	Kans-Neb. Nat. Gas Co. Inc.	1st Mtg. S.F.,3-3/8%, 1965	Apr. 1945	$ 4.5	Baa	106.38	2.95%	104.08	3.10%	2.30	2.2	N.S.	
2.	Montana-Dakota Util. Co.	1st Mtg. 3%, 1965	Apr. 1945	7.5	Baa	102.62	2.83	101.06	2.93	1.56	1.5	C.B.	
3.	Tennessee Gas Trans. Co.	1st Mtg. PL, 3%, 1965	May 1945	35.0	Baa	102.25	2.85	99.74	3.02	2.51	2.5	N.S.	C. 5-13-46 @ 102.50
4.	Tennessee Gas Trans.Co.	1st Mtg. PL, 2-3/4%, 1966	Apr. 1946	35.0	Baa 1/	101.50	2.65	100.00	2.75	1.50	1.5	N.S.	
5.	Tennessee Gas Trans.Co.	1st Mtg. PL, 3%, 1967	Sept.1947	40.0	Baa 1/	102.25	2.85	100.73	2.95	1.52	1.5	N.S.	
6.	Southern Natural Gas Co.	1st Mtg. 3%, 1968	June 1948	28.0	A	100.75	2.95	99.46	3.04	1.29	1.3	C.B.	
7.	Equitable Gas Company	1st Mtg. 3-1/4%, 1973	July 1948	14.0	A	100.84	3.20	99.30	3.29	1.54	1.5	C.B.	
8.	Tennessee Gas Trans. Co.	1st Mtg. P.L. 3%, 1969	June 1949	50.0	Baa 1/	100.75	2.95	99.95	3.00	0.80	0.8	C.B.	
9.	Southern Union Gas Co.	1st Mtg. S.F. 2-7/8%, 1975	Feb. 1950	18.0	Baa 2/	102.00	2.76	101.64 3/	2.78	0.36	0.4	N.S.	
10.	Tennessee Gas Trans. Co.	1st Mtg. P. L. 3 %, 1970	Sept.1950	40.0	Baa 1/	101.75	2.89	100.63	2.96	1.12	1.1	C.B.	
11.	Southern Nat. Gas Co.	1st Mtg. PL.S.F. 2-7/8%,1970	Jan. 1951	17.5	A	100.68	2.83	99.57	2.90	1.11	1.1	C.B.	
12.	Tennessee Gas Trans. Co.	1st Mtg. 3-1/8%, 1971	Feb. 1951	35.0	Baa 1/	101.25	3.04	100.80	3.07	0.44	0.5	C.B.	
13.	Montana-Dakota Util Co.	1st Mtg. 3-5/8%, 1976	May 1951	3.0	Baa	101.24	3.55	99.52	3.65	1.72	1.7	C.B.	
14.	Washington Gas Light Co.	Ref. 3-1/2%, 1976	July 1951	9.0	A	100.67	3.46	99.31	3.54	1.36	1.4	C.B.	
15.	Tennessee Gas Trans. Co.	1st Mtg. P.L. 3-1/2%, 1971	Sept.1951	45.0	Baa 1/	100.72	3.45	99.94	3.50	0.78	0.8	C.B.	
16.	Southern Union Gas Co.	1st Mtg. 3-3/8%, 1976	Oct. 1951	5.0	Baa 2/	100.00	3.38	98.31	3.48	1.69	1.7	N.S.	
17.	Tennessee Gas Trans. Co.	1st Mtg. 3-7/8%, 1972	Sept.1952	40.0	A	101.75	3.75	100.49	3.84	1.26	1.2	C.B.	C. 1-13-55 @ 104.25
18.	Tennessee Gas Trans. Co.	1st Mtg. P.L.,4-1/8%, 1973	Feb. 1953	30.0	A	101.30	4.03	99.78	4.14	1.52	1.5	C.B.	C. 1-13-55 @ [illegible]
19.	Southern Nat. Gas Co.	1st Mtg. P. L. 4%, 1973	May 1953	30.0	A	99.00	4.07	97.61	4.18	1.39	1.4	C.B.	
20.	Washington Gas Light Co.	Ref. Mtg. 4-7/8%, 1978	June 1953	7.0	A	101.82	4.75	99.41	4.91	2.41	2.4	C.B.	C. 12-31-53 @ 105.52
21.	Tennessee Gas Trans. Co.	1st Mtg. P.L. 4%, 1973	Dec. 1953	25.0	A	101.38	3.90	100.01	4.00	1.37	1.4	C.B.	C. 1-13-55 @ 105.10
22.	Southern Nat. Gas Co.	1st Mtg. P. L. 3-1/8%, 1974	Mar. 1954	20.0	A	100.00	3.13	98.93	3.20	1.07	1.1	C.B.	
23.	Tennessee Gas Trans. Co.	1st Mtg. P. L. 3-5/8%, 1974	June 1954	25.0	A	101.79	3.50	100.58	3.58	1.21	1.2	C.B.	
24.	Washington Gas Light Co.	Ref. Mtg. P. L. 3-1/4%, 1979	June 1954	5.0	A	100.00	3.25	98.13	3.36	1.87	1.9	C.B.	
25.	Colo. Interstate Gas Co.	1st Mtg. P.L. 3.35%, 1974	July 1954	30.0	A	100.00	3.35	98.24	3.50	1.76	1.8	N.S.	
26.	Montana-Dakota Util Co.	1st Mtg. S.F. 3-3/8%, 1975	Sept.1954	7.0 5/	Baa	101.41	3.28	100.25	3.36	1.16	1.1	C.B.	
27.	Tennessee Gas Trans. Co.	1st Mtg. P.L. 3-1/2%, 1975	Dec. 1954	125.0	A	101.44	3.40	100.11	3.49	1.34	1.3	N.S.	
28.	Washington Gas Light Co.	Ref. Mtg. 3-1/2%, 1980	May 1955	8.0	A	101.68	3.40	100.33	3.48	1.35	1.3	C.B.	
29.	Tennessee Gas Trans. Co.	1st Mtg. P.L. 3-7/8%, 1976	Sept.1955	50.0	A	101.06	3.80	99.53	3.91	1.53	1.5	N.S.	
30.	Tennessee Gas Trans. Co.	1st Mtg. P. L. 4-3/4%, 1976	Sept.1956	50.0	A	100.65	4.70	99.07	4.82	1.58	1.6	N.S.	

* C.B., Competitive bidding; N.S. Negotiated sale.

For further footnotes see following page.

List continued on following page

PRINCIPAL PUBLIC OFFERINGS OF NATURAL GAS PIPELINE COMPANY MORTGAGE BONDS SINCE JANUARY 1, 1945 - Continued

No.	Company (a)	Issue (b)	Offering Date (c)	Principal Amount in Millions (d)	Moody's Rating at Offering (e)	Price to Public Amount (f)	Price to Public Yield (g)	Net Proceeds to Company Amount (h)	Net Proceeds to Company Cost (i)	Cost of Flotation Amount (j)	Cost of Flotation % of Public Offering Price (k)	How Sold* (l)	Notes (m)
31.	Texas Eastern Trans. Co.	1st Mtg. P.L. 4-7/8%, 1977	Mar. 1957	$40.0	Baa	99.50	4.92%	97.96	5.04	1.54	1.5	N.S.	Non-ref. prior to 1967.
32.	Transco. Gas P. L.Corp.	1st Mtg. P. L. 5 %, 1977	Apr. 1957	50.0	Baa	100.63	4.95	98.98	5.08	1.65	1.6	N.S.	Non-ref. prior to 1967.
33.	Washington Gas Light Co.	Ref. Mtg. 5%, 1982	May 1957	8.0	A	100.00	5.00	98.51	5.12	1.49	1.5	C.B.	
34.	Tennessee Gas Trans. Co.	1st Mtg. P. L. 5-1/4%, 1977	May 1957	50.0	A	100.00	5.25	98.45	5.38	1.55	1.6	N.S.	Non-red. prior to 1962 ex. for S.F.
35.	Mich. Wisconsin P. L. Co.	1st Mtg. P.L. 6-1/4%, 1977	June 1957	30.0	Baa	102.89	6.00	100.20	6.23	2.69	2.6	C.B.	
36.	Texas Eastern Transm. Corp.	1st Mtg. P.L. 5-5/8%, 1977	Sept.1957	30.0	Baa	99.00	5.70	97.48	5.84	1.52	1.5	N.S.	Non-ref. prior to 1967
37.	Texas Eastern Transm. Corp.	1st Mtg. P.L. 4-7/8%, 1973	Mar. 1958	25.0	Baa	99.50	4.92	97.96	5.04	1.54	1.5	N.S.	Non-ref. prior to 1963
38.	Transco Gas P.L. Corp.	1st Mtg. P.L. 4-5/8%, 1978	May 1958	25.0	Baa	99.25	4.68	97.57	4.82	1.68	1.7	N.S.	Non-ref. prior to 1963
39.	Texas Eastern Transm. Corp.	1st Mtg. P.L. 5-5/8%, 1978	Sept.1958	35.0	Baa	99.00	5.71	97.56	5.83	1.44	1.5	N.S.	Non-ref. prior to 1963
40.	Tennessee Gas Transm. Co.	1st Mtg. P.L. 5-3/8%, 1979	Sept.1958	50.0	A	100.00	5.38	98.48	5.50	1.52	1.5	N.S.	Non-ref. prior to 1964
41.	Nat. Gas P.L. Co. of Amer.	1st Mtg. P.L. 4-5/8%, 1978	Nov. 1958	30.0	A	99.25	4.68	97.88	4.79	1.37	1.4	N.S.	Non-ref. prior to 1963
42.	So. Natural Gas Co.	1st Mtg. P.L. 4-3/4%, 1979	Jan. 1959	35.0	A	100.00	4.75					C.B.	Non-ref. prior to 1964
43.	Transco. Gas P.L. Corp.	1st Mtg. P.L. 5% , 1979	Jan. 1959	35.0	Baa	98.74	5.10					N.S.	Non-ref. prior to 1964
44.	Colo. Interstate Gas Co.	1st Mtg. P.L. 4.70% , 1979	Mar. 1959	33.0	A	100.38	4.67					N.S.	Non-ref. prior to 1964
45.	Nat. Gas P.L. Co. of Amer.	1st Mtg. P.L. 4-5/8%, 1979	Apr. 1959	20.0	A	99.68	4.65					N.S.	Non-ref. prior to 1964
46.	Texas Eastern Trans. Corp.	1st Mtg. P.L. 4-7/8%, 1979	Apr. 1959	45.0	Baa	99.50	4.92					N.S.	Non-ref. prior to 1964
47.	Tennessee Gas Trans. Co.	1st Mtg. P.L. 5-1/4%, 1979	July 1959	50.0	A	101.25	5.15					N.S.	Non-ref. prior to 1964
48.	Transco. Gas P.L. Corp.	1st Mtg. P.L. 5-1/8%, 1980	July 1959	20.0	Baa	99.69	5.15					N.S.	Non-ref. prior to 1964
49.	Arkansas Louisiana Gas Co.	1st Mtg. 5-1/8%, 1979	Dec. 1959	16.0	A	99.69	5.15					N.S.	Non-ref. prior to 1964

* C.B., Competitive bidding; N.S. Negotiated sale.

1/ Rating raised to A Nov.24, 1951.
2/ Rating raised to A May 10, 1952 and AA, May 7, 1957.
3/ Gross proceeds to issuing company; net proceeds not available.
4/ "Effective September 28, 1950, the public offering price of the Bonds set forth . . .was changed to 101.45% of the principal amount thereof and accrued interest, and the selling concession to Selected Dealers . . was reduced to 1/8 of 1% of the principal amount of the Bonds. Approximately $21,400,000 of the principal amount of the Bonds remained unsold by the Purchasers as of September 27, 1950."
5/ Concurrently with this offering Montana-Dakota issued $5,000,000 1st 3-1/2% bonds known as "electric bonds".

PRINCIPAL PUBLIC OFFERINGS OF NATURAL GAS PIPE LINE COMPANY DEBENTURES SINCE JANUARY 1, 1950

No.	Company (a)	Issue (b)	Offered during (c)	Principal Amt. Millions (d)	Moody's Rating at Offering (e)	Public Offering Price Amount (f)	Public Offering Price Yield (g)	Net Proceeds to Company Amount (h)	Net Proceeds to Company Cost (i)	Cost of Flotation Amount (j)	Cost of Flotation % of Public Offering Price (k)	How Sold* (l)	Notes (m)
1.	Panhandle Eastern P. L. Co.	2-3/4%, 1975	July 1950	$20.0	A	99.11	2.80%	98.09	2.85%	1.02	1.0	N.S.	No prior mtge liens
2.	North Penn Gas Company	5%, 1971	June 1951	2.7	Baa	103.20	4.75	97.67	5.18	5.53	5.4	C.B.	C. 3-9-53 @ 104.93
3.	Mt. Fuel Supply Co.	3-1/2%, 1971	Oct. 1951	15.0	A	100.72	3.45	99.15	3.56	1.57	1.5	N.S.	No prior mtge liens
4.	Southern Union Gas Co.	S.F. 3-5/8%, 1971	Oct. 1951	5.0	Ba 1/	100.35	3.60	98.66	3.72	1.69	1.7	N.S.	
5.	Tennessee Gas Trans. Co.	4-7/8%, 1971	Dec. 1951	25.0	Baa	102.25	4.70	100.21	4.73	2.04	2.0	C.B.	C. 10-22-54 @ 104.70
6.	Southern Union Gas Co.	S.F. 3-5/8%, 1972	May 1952	5.0	Baa	100.00	3.63	98.46	3.74	1.54	1.5	N.S.	
7.	Northern Natural Gas Co.	S.F. 4-1/2%, 1973	June 1953	40.0	A	102.00	4.35	100.21	4.48	1.79	1.8	C.B.	(No prior mtge liens (C. 6-12-54 @ 106
8.	Tennessee Gas Trans. Co.	5%, 1973	Sept.1953	20.0	Baa	101.90	4.85	100.17	4.99	1.73	1.7	C.B.	C. 10-22-54 @ 104.65
9.	Northern Natural Gas Co.	S.F. 3-5/8%, 1973	Nov. 1953	25.0	A	101.00	3.55	99.84	3.63	1.16	1.1	N.S.	No prior mtge liens
10.	Texas Eastern Trans. Corp.	4-3/8%, 1974	Mar. 1954	17.0	Ba	100.00	4.38	98.35	4.38	1.65	1.7	N.S.	
11.	Northern Natural Gas Co.	S.F. 3-1/4%, 1973	May 1954	40.0	A	101.45	3.15	100.40	3.22	1.05	1.0	N.S.	No prior mtge liens
12.	Mt. Fuel Supply Co.	3-1/8%, 1974	June 1954	12.0	A	99.25	3.18	97.67	3.28	1.58	1.6	N.S.	No prior mtge liens
13.	Panhandle Eastern P. L. Co.	3-1/8%, 1974	June 1954	35.0	A	99.63	3.15	98.40	3.23	1.23	1.2	N.S.	No prior mtge liens
14.	Northern Natural Gas Co.	S.F. 3-1/4%, 1974	July 1954	25.0	A	100.50	3.22	99.38	3.29	1.12	1.1	N.S.	No prior mtge liens
15.	Tennessee Gas Trans. Co.	4-1/4%, 1974	Sept.1954	65.0	Baa	102.00	4.10	100.23	4.23	1.77	1.7	N.S.	
16.	Tennessee Gas Trans. Co.	4%, 1975	Apr. 1955	25.0	Baa	101.25	3.91	99.73	4.02	1.52	1.5	N.S.	
17.	Southern Union Gas Co.	S.F. 4-1/4%, 1976	June 1956	10.0	Baa	100.67	4.20	99.27	4.30	1.40	1.4	N.S.	
18.	Tennessee Gas Trans. Co.	4-1/2%, 1977	July 1956	30.0	Baa	100.00	4.50	98.48	4.62	1.52	1.5	N.S.	
19.	Texas Eastern Trans. Corp.	5-1/2%, 1976	Dec. 1956	30.0	Ba	100.00	5.50	96.59	5.79	1.91	1.9	N.S.	
20.	Lone Star Gas Co.	4-5/8%, 1982	Apr. 1957	30.0	A	101.00	4.54	99.49	4.66	1.51	1.5	N.S.	(No prior mtge liens (Non-ref. prior to 1967
21.	Northern Natural Gas Co.	S.F. 4-1/2%, 1976	Apr. 1957	30.0	A	99.50	4.54	98.22	4.66	1.28	1.3	N.S.	(No prior mtge liens (Non-ref.prior to 1964
22.	Texas Eastern Trans. Corp.	6%, 1977	June 1957	15.0	Ba	98.50	6.13	96.34	6.33	2.16	2.2	N.S.	Non-ref prior to 1967
23.	Tennessee Gas Trans. Corp.	6%, 1977	July 1957	25.0	Baa	99.00	6.09	97.20	6.25	1.89	2.8	N.S.	Non-ref.prior to 1967
24.	Southern Union Gas Co.	5-1/2%, 1982	Nov. 1957	9.0	Baa	100.00	5.50	98.54	5.61	1.46	1.5	N.S.	Non-ref.prior to 1964
25.	Transcontinental Gas P.L.Corp.	6-1/8%, 1978	Nov. 1957	20.0	Ba	99.50	6.17	97.33	6.36	2.17	2.2	N.S.	Non-ref. prior to 1967
26.	Northern Natural Gas Co.	4-5/8%, 1977	Dec. 1957	25.0	A	100.00	4.63	98.77	4.72	1.23	1.2	N.S.	Non-ref. prior to 1962
27.	Mississippi River Fuel Corp.	S.F. 4-3/4%, 1978	Mar. 1958	30.0	Baa	100.50	4.71	99.08	4.82	1.42	1.4	N.S.	Non-ref. prior to 1963
28.	Tennessee Gas Trans. Corp.	5%, 1978	Apr. 1958	30.0	Baa	100.00	5.00	98.16	5.15	1.84	1.8	N.S.	Non-ref. prior to 1963
29.	Mountain Fuel Supply Co.	4%, 1983	June 1958	16.0	A	100.00	4.00	98.49	4.10	1.51	1.5	N.S.	Non-ref. prior to 1963
30.	Southern Natural Gas Co.	4-1/2%, 1978	July 1958	30.0	Baa	100.00	4.50	98.76	4.60	1.24	1.2	C.B.	Non-ref. prior to 1963

*C.B. - Competitive bidding. N.S. - Negotiated sale.

1/ Raised to Baa May 10, 1952

Source: Data taken from Moody's Public Utilities Supplements, Bank and Quotation Record, Standard & Poor's Bond Guide, Registration Statements, Securities and Exchange Commission Reports and Annual Reports to FPC.

PRINCIPAL PUBLIC OFFERINGS OF NATURAL GAS PIPE LINE COMPANY DEBENTURES (Continued)
SINCE JANUARY 1, 1950

No.	Company (a)	Issue (b)	Offered during (c)	Principal Amt. Millions (d)	Moody's Rating at Offering (e)	Public Offering Price Amount (f)	Public Offering Price Yield (g)	Net Proceeds to Company Amount (h)	Net Proceeds to Company Cost (i)	Cost of Flotation Amount (j)	Cost of Flotation % of Public Offering Price (k)	How Sold* (l)	Notes (m)
31.	Natural Gas Pipeline Co. of Am.	4-3/4%, 1978	July, 1958	$35.0	Baa-	$ 99.00	4.83%	97.33	4.96%	1.67	1.7	N.S.	Non-ref. prior to 1963
32.	Northern Natural Gas Co.	4-5/8%, 1978	Nov. 1958	30.0	A	100.32	4.60	99.05	4.70	1.27	1.3	N.S.	Non-ref. prior to 1963
33.	Northern Natural Gas Co.	5-1/8%, 1979	Oct. 1959	25.0	A	100.00	5.13					N.S.	Non-ref. prior to 1964

*C.B. - Competitive bidding. N.S. - Negotiated sale.

Source: Data taken from Moody's Public Utilities Supplements, Bank and Quotation Record, Standard & Poor's Bond Guide, Registration Statements, Securities and Exchange Commission Reports and Annual Reports to FPC.

PRINCIPAL PUBLIC OFFERINGS OF NATURAL GAS PIPE LINE COMPANY PREFERRED STOCK SINCE JANUARY 1, 1945

No.	Company (a)	Issue (b)	Offered during (c)	Number of Shares (d)	Standard & Poor's Rating (e)	Public Offering Price For Share (f)	Public Offering Price Yield (g)	Net Proceeds to Company For Share (h)	Net Proceeds to Company Cost % (i)	Cost of Flotation Amount (j)	Cost of Flotation % of Public Offering Price (k)	How Sold (l)	Notes (z)
1.	Tennessee Gas Trans. Co.	5%, $100 par	May 1945	75,000		104.00	4.81	100.20	4.99	3.80	3.65	N.S.	Called May,1946 @ 105
2.	Panhandle Eastern P. L. Co.	4%, $100 par	July 1945	140,000		104.00	3.85	101.38	3.95	2.62	2.52	N.S.	
3.	Southern Union Gas Company	4-1/4%, $100 par	Jan. 1946	12,178		101.50	4.19	98.26	4.33	3.24	3.19	N.S.	
4.	Tennessee Gas Trans. Co.	4.10%, $100 par	April 1946	100,000		106.00	3.86	103.49	3.96	2.51	2.37	N.S.	
5.	El Paso Natural Gas Co.	4.10%, $100 par	July 1946	63,264		109.00	3.76	106.52	3.85	2.48	2.28	N.S.	
6.	Tennessee Gas Trans. Co.	4.25%, $100 par	Sept.1947	100,000		103.00	4.10	99.92	4.25	3.08	2.99	N.S.	
7.	Southern Union Gas Co.	5%, $100 par	June 1948	25,000		100.00	5.00	95.10	5.26	4.90	4.90	N.S.	Called April,1951 @ 104
8.	Tennessee Gas Trans.Co.	4.65%, $100 par	Sept.1949	100,000		103.50	4.49	99.53	4.67	3.97	3.84	N.S.	
9.	Southern Union Gas Co.	4.75%, $100 par	Feb. 1950	30,000		104.00	4.57	100.29	4.74	3.71	3.57	N.S.	
10.	Tennessee Gas Trans. Co.	4.60%, $100 par	April 1950	100,000		105.00	4.38	101.13	4.55	3.87	3.69	N.S.	
11.	Washington Gas Light Co.	$4.25, no par	June 1950	26,098		103.00	4.13	100.08	4.25	2.92	2.83	N.S.	
12.	Tennessee Gas Trans. Co.	4.64%, $100 par	Oct. 1950	100,000		103.10	4.50	99.63	4.66	3.47	3.37	N.S.	
13.	Kans-Neb. Nat. Gas Co. Inc.	$5.00, no par	Feb. 1951	10,950		105.00	4.76	101.31	4.94	3.69	3.51	N.S.	
14.	Transcontinental Gas P.L. Corp.	$2.55, no par	Mar. 1951	550,000		52.00	4.90	49.79	5.12	2.21	4.25	N.S.	
15.	Tennessee Gas Trans. Co.	5.10%, $100 par	May 1951	100,000		102.00	5.00	98.25	5.19	3.75	3.68	N.S.	
16.	Texas Gas Trans. Corp.	5.40%, $100 par	July 1951	100,000		100.00	5.40	95.73	5.64	4.27	4.27	N.S.	
17.	El Paso Natural Gas Co.	5-1/2%, $100 par	Dec. 1951	100,000		102.00	5.39	97.70	5.63	4.30	4.22	N.S.	
18.	El Paso Natural Gas Co.	5.36%, $100 par	Mar. 1952	100,000		100.00	5.36	96.37	5.56	3.63	3.63	N.S.	
19.	Tennessee Gas Trans. Co.	5.25%, $100 par	May 1952	100,000		100.00	5.25	96.10	5.46	3.90	3.90	N.S.	
20.	Southern Union Gas Co.	5%, $100 par	May 1952	30,000		100.00	5.00	96.04	5.21	3.96	3.96	N.S.	
21.	Texas Eastern Trans. Corp.	5.50%, $100 par	Aug. 1952	190,000		100.00	5.50	96.02	5.73	3.98	3.98	N.S.	
22.	El Paso Natural Gas Co.	5.65%, $100 par	July 1953	200,000		100.00	5.65	96.43	5.86	3.57	3.57	N.S.	
23.	Tennessee Gas Trans. Co.	5.85%, $100 par	Sept.1953	100,000		100.00	5.85	96.38	6.07	3.62	3.62	N.S.	Called July,1955 @ 105
24.	Northern Natural Gas Co.	5.50%, $100 par	Sept.1953	250,000		100.00	5.50	97.21	5.66	2.79	2.79	N.S.	
25.	Tennessee Gas Trans. Co.	5.12%, $100 par	Mar. 1954	100,000		100.38	5.10	96.89	5.28	3.49	3.48	N.S.	

Continued on following page.

PRINCIPAL PUBLIC OFFERINGS OF NATURAL GAS PIPE LINE COMPANY PREFERRED STOCK SINCE JANUARY 1, 1945 (Cont'd)

No.	Company (a)	Issue (b)	Offered During (c)	Number of Shares (d)	Standard & Poor's Rating (e)	Public Offering Price Per Share (f)	Public Offering Price Yield (g)	Net Proceeds to Company Per Share (h)	Net Proceeds to Company Cost % (i)	Cost of Flotation Amount (j)	Cost of Flotation % of Public Offering Price (k)	How Sold (l)	Notes (m)
26.	Kans-Neb. Nat.Gas Co. Inc.	$5.00, no par	May 1954	10,000		101.00	4.95	96.51	5.18	4.49	4.45	N.S.	
27.	Colorado Interstate Gas Co.	5%, $100 par	July 1954	110,000		100.00	5.00	96.95	5.16	3.05	3.05	N.S.	
28.	Texas Gas Trans. Corp.	4.96%, $100 par	Sept. 1954	75,000		100.00	4.96	96.35	5.15	3.65	3.65	N.S.	
29.	Transcontinental Gas PL Corp.	$4.90, no par	April 1955	150,000		100.00	4.90	96.49	5.08	3.51	3.51	N.S.	Call. $105.00 1st.Yr.
30.	Tennessee Gas Trans. Co.	4.90%, $100 par	June 1955	200,000		100.00	4.90	96.67	5.07	3.33	3.33	N.S.	Call. $105.00 1st. 3 Yrs.
31.	Texas Eastern Trans. Corp.	5%, $100 par	July 1955	160,000		100.00	5.00	96.56	5.18	3.44	3.44	N.S.	Call. $105.00 1st. 2 Yrs.
32.	Montana-Dakota Utilities Co.	4.70%, $100 par	Nov. 1955	50,000		100.00	4.70	97.42	4.82	2.58	2.58	N.S.	Call. $105.00 1st. 5 Yrs.
33.	Southern Union Gas Co.	5.05%, $100 par	June 1956	40,000		100.00	5.05	97.65	5.17	2.35	2.35	N.S.	Call. $105.00 1st. Yr.
34.	El Paso Natural Gas Co.	5.50%, $100 par	Aug. 1956	250,000		100.00	5.50	96.60	5.69	3.40	3.40	N.S.	Call. $105.50 1st. Yr.
35.	Texas Eastern Trans. Corp.	5.85%, $100 par	Oct. 1956	150,000		100.00	5.85	96.56	6.06	3.44	3.44	N.S.	Call. $106.00 1st. 5 Yrs.
36.	El Paso Natural Gas Co.	5.68%, $100 par	Mar. 1957	150,000		100.00	5.68	96.46	5.89	3.54	3.54	N.S.	Call. $110.00 1st.5 Yrs.
37.	Transcontinental Gas PL Corp.	$5.96, no par	April 1957	100,000		100.00	5.96	96.61	6.17	3.39	3.39	N.S.	Call. $110.00 1st. 5 Yrs.
38.	El Paso Natural Gas Co.	6.40%, $100 par	Aug. 1957	100,000		100.00	6.40	95.90	6.67	4.10	4.10	N.S.	Call. $115.00 1st. 5 Yrs.
39.	Northern Natural Gas Co.	5.80%, $100 par	Oct. 1957	160,000		100.00	5.80	97.16	5.97	2.84	2.84	N.S.	Call. $105.00 1st. 5 Yrs.
40.	Texas Eastern Trans. Corp.	$6.70, $100 par	Nov. 1957	100,000		100.00	6.70	96.24	6.96	3.76	3.76	N.S.	Call. $107.50 1st. Yr.
41.	Transcontinental Gas PL Corp.	$5.70, no par	May, 1958	150,000		100.00	5.70	96.65	5.90	3.35	3.35	N.S.	Call. $110.00 1st 5 Yrs.
42.	Texas Eastern Trans. Corp.	5.80%, $100 par	June 1958	150,000		100.00	5.80	96.72	6.00	3.28	3.28	N.S.	Call. $110.00 1st 5 Yrs.
43.	Southern Union Gas Co.	5.35%, $100 par	June 1958	30,000		100.00	5.35	97.07	5.51	2.93	2.93	N.S.	Call. $108.00 1st 5 Yrs.
44.	Washington Gas Light Co.	$5.00, no par	July 1958	60,000		100.00	5.00	97.64	5.12	2.36	2.36	N.S.	Call. $107.50 1st 5 Yrs.
45.	Natural Gas P.L. Co. of America	5-3/4%, $100 par	July 1958	150,000		100.00	5.75	96.89	5.93	3.11	3.11	N.S.	Call. $110.00 1st 5 Yrs.
46.	Colo. Interstate Gas Co.	5.35%, $100 par	Mar. 1959	120,000		100.00	5.35					N.S.	Call. $105.50 1st 5 Yrs.
47.	Texas Eastern Trans. Corp.	5.60%, $100 par	Mar. 1959	150,000		100.00	5.60					N.S.	Call. $105.60 1st 5 Yrs.
48.	Transco. Gas P.L. Corp.	$5.60, no par	July 1959	150,000		100.00	5.60					N.S.	Call. $110.00 1st 5 Yrs.
49.	Northern Natural Gas Co.	5.60%, $100 par	Oct. 1959	200,000		100.00	5.60					N.S.	Call. $115.00 1st 5 Yrs.

N.S. Negotiated Sale.

Source: Data taken from Moody's Public Utility Supplements and Manuals, Standard & Poor's Stock Guide, Bank and Quotation Record, Registration Statements, Securities and Exchange Commission Reports and Annual Reports to FPC.

PRINCIPAL PUBLIC OFFERINGS OF NATURAL GAS PIPE LINE COMPANY COMMON STOCK

1946 TO DATE

No.	Common Stock of (a)	Approximate Offering Date (b)	No. of Shares Offered (c)	Size of Offering (000) (d)	Per Share: Price to Public (e)	Per Share: Price to Underwriter (f)	Per Share: Expenses (g)	Per Share: Net Proceeds (h)	Latest available earnings: 12 mos. to (i)	Latest available earnings: Per Share (j)	Ratio of earnings to: Price to Public (k)	Ratio of earnings to: Price to Underwriters (l)	Ratio of earnings to: Net Proceeds (m)
PL-1	Tennessee Gas Trans. Co.	Jan. 1946	812,100	1/ $ 9,745	$12.00	$11.10	$0.09	$ 11.01	Nov. 1945	2.07	17.3	16.6	16.8
PL-2	Tennessee Gas. Trans. Co.	Apr. 1946	484,444	2/ 9,568	19.75	18.65	.03 3/	18.62	Dec. 1945	2.16	12.5	13.2	13.2
PL-3	Texas Eastern Trans. Corp.	Nov. 1947	3,550,000	4/ 33,725	9.50	8.50	.05	8.45	5/	5/	-	-	-
PL-4	Northern Natural Gas Co.	Dec. 1947	710,500	6/ 19,183	27.00	25.80	.10	25.70	Sept. 1947	3.43	12.7	13.3	13.3
PL-5	Tennessee Gas Trans. Co.	Sept. 1948	400,000	12,100	30.25	28.60	.19	28.41	Dec. 1947	2.40	7.9	8.4	8.4
PL-6	Miss. River Fuel Corp.	Jan. 1949	144,200	7/ 4,326	30.00	28.00	.49	27.51	Dec. 1947	2.46	8.2	8.8	8.9
PL-7	Miss. River Fuel Corp.	Apr. 1949	435,282	8/ 13,058	30.00	8/	8/	-8/	Dec. 1948	3.49	11.6	-	-
PL-8	Texas Gas Trans. Corp.	Aug. 1949	218,625	7/ 2,624	12.00	11.10	.18	10.92	May 1949	0.75	6.3	6.8	6.9
PL-9	Tennessee Gas Trans. Co.	Sept. 1949	400,000	12,100	30.25	28.80	.12	28.68	July 1949	2.24	7.4	7.8	7.8
PL-10	Texas Gas Trans. Corp.	Mar. 1950	193,306	7/ 3,528	18.25	17.13	.41	16.72	Dec. 1949	0.81	4.4	4.7	4.8
PL-11	Tennessee Gas Trans. Co.	Oct. 1950	250,000	7,500	30.00	28.55	.20	28.35	Aug. 1950	1.84	6.1	6.4	6.5
PL-12	Tennessee Gas Trans. Co.	Apr. 1951	400,000	9,600	24.00	22.75	.11	22.64	Dec. 1950	1.73	7.2	7.6	7.6
PL-13	Colorado Interstate Gas Co.	Apr. 1952	966,000	7/ 25,841	26.75	25.75	n.a.	-	Dec. 1951	2.88	7.0	7.3	-
PL-14	Tennessee Gas Trans. Co.	May 1952	250,000	7,375	29.50	28.10	.12	27.98	Mar. 1952	1.73	5.9	6.2	6.2
PL-15	Texas Gas Trans. Corp.	Aug. 1952	350,000	6,081	17.38	16.48	.13	16.35	June 1952	1.49	8.6	9.0	9.1
PL-16	Tennessee Gas Trans. Co.	May 1953	1,000,000	22,750	22.75	21.25	.06	21.19	Feb. 1953	1.86	8.2	8.8	8.8
PL-17	Texas Gas Trans. Corp.	Mar. 1954	200,000	7/ 3,450	17.25	16.35	.17	16.19	Dec. 1953	1.59	9.2	9.7	9.8
PL-18	Tennessee Gas Trans. Co.	Sept. 1955	400,000	16,550	41.375	39.475	.12	39.35	June 1955	2.01	4.9	5.1	5.1
PL-19	Colorado Interstate Gas Co.	Nov. 1955	256,503	7/ 14,729	57.50	55.50	n.a.	n.a.	Aug. 1955	3.85	6.7	6.9	-
PL-20	Transco. Gas P.L. Corp.	Nov. 1957	1,000,000	17,750	17.75	16.55	.15	16.40	Aug. 1957	1.64	9.2	9.9	10.0
PL-21	Tennessee Gas Trans. Co.	Feb. 1958	1,000,000	30,750	30.75	29.05	.07	28.98	Nov. 1957	2.00	6.5	6.9	6.9
PL-22	Transco. Gas P.L. Corp.	Oct. 1958	600,000	14,095	23.38	21.94	.12	21.82	June 1958	1.46	6.3	6.7	6.7
PL-23	Tennessee Gas Trans. Co.	Feb. 1960	1,600,000	55,200	34.50	32.75	.08	32.67	Dec. 1959	1.93	5.6	5.9	5.9

n.a. Not available.

1/ Of which 238,000 represented a sale by the issuing company, and 574,100 shares represented a disposition by certain stockholders.

2/ Of which 134,444 shares did not represent new financing.

3/ Company's Annual Report to the FPC (Form 2) for the year 1946 shows Common stock expense for the year as $31,382; SEC report shows expense applicable to the stock issued during January 1946 (No. PL-1,) as $21,420, leaving expenses applicable to this offering $10,412 or $0.03 a share.

4/ The total offering was 3,564,000 shares of which 3,550,000 shares represented an offering in behalf of the issuing company.

5/ Company had been operating less than a year when this stock was offered so earnings on a 12 mos. basis were not available.

6/ Represents a disposition by North American Light & Power Co.

7/ Represents a disposition by certain stockholders; does not represent financing by the issuing company.

8/ Represents, as to 305,688 shares, a disposition by United Gas Corp. and as to 129,594 shares, a disposition by underwriters of stock which they had acquired by exercising rights which they had purchased from United Gas Corp. The rights offering, which preceded this public offering, consisted of 327,610 shares which had been offered to stockholders of record April 12, 1949 on a 1-for-2 basis at $27.25 per share. The Company's Annual Report to the FPC (Form 2) for the year 1949 shows $111,971, or $0.34 a share, as the cost of issuing this stock.

PRINCIPAL RIGHTS OFFERINGS OF NATURAL GAS PIPE LINE COMPANY COMMON STOCKS

1946 TO DATE

No.	Common Stock of (a)	Record Date (b)	No. of Shares Offered (c)	Size of Offering (000) (d)	Basis of Offering 1 for (e)	Per Cent Subscribed (f)	Per Share: Market Price day before record (g)	Per Share: Subscription Price (h)	Per Share: Expenses (i)	Per Share: Net Proceeds (j)	Latest Available earnings: 12 mos to (k)	Latest Available earnings: Per Share (l)	Ratio of Earnings to: Market Price (m)	Ratio of Earnings to: Offering Price (n)	Ratio of Earnings to: Net Proceeds (o)
Pl-1	El Paso Natural Gas Co.	7-1-46	100,057	$ 4,202	6	97%	60	$42.00	$0.77	$ 41.23	Apr. '46	$3.39	5.7	8.1	8.2
Pl-2	Northern Natural Gas Co.	3-30-49	406,000	11,977	5	100	34-3/4	29.50	.18	29.32	Dec. '48	3.12	9.0	10.6	10.6
Pl-3	Miss. River Fuel Corp.	4-12-49	327,610	8,927	2	n.a.	31 b	27.25	.34	26.91	Dec. '48	3.49	11.3	12.8	13.0
Pl-4	Southern Natural Gas Co.	6-6-49	141,325	3,674	10	100	30	26.00	.44	25.56	Mar. '49	3.27	10.9	12.6	12.8
Pl-5	Miss. River Fuel Corp.	4-4-50	245,708	8,354	4	96	35-1/2 b	34.00	.54	33.46	Dec. '49	2.79	7.9	8.2	8.3
Pl-6	Northern Natural Gas Co.	5-3-50	304,500	9,592	8	100	35-7/8	31.50	.25	31.25	Mar. '50	2.76	7.7	8.8	8.8
Pl-7	Texas Ill. Nat.Gas P. Co.	7-17-50	1,750,000	17,500	0.3	99 1/	12-5/8 b	10.00	.03	9.97	n.a	n.a	-	-	-
Pl-8	El Paso Natural Gas Co.	9-19-50	230,000	4,910	10	100	23	21.38	.90	20.48	July '50	1.84	8.0	8.6	9.0
Pl-9	Texas Ill.Nat. Gas P. Co.	12-8-50	300,000	3,000	7-1/2	100 1/	17 b	10.00	.08	9.92	n.a.	n.a.	-	-	-
Pl-10	Southern Natural Gas Co.	1-30-51	155,546	3,133	10	100	39-1/8	33.00	.43	32.57	Oct. '50	3.39	9.9	11.9	11.9
Pl-11	Texas Eastern Trans.Corp.	3-7-52	610,937	10,386	8	100	19 b	17.00	.57	16.43	Dec. '51	1.76	9.3	10.4	10.7
Pl-12	El Paso Natural Gas Co.	3-24-53	883,882	28,726	4	83	36-5/8	32.50	1.03	31.50 u	Dec. '52	2.95	8.1	9.0	9.3
Pl-13	Northern Natural Gas Co.	5-5-53	548,100	19,321	5	82.5	39-1/4	35.25	.50	34.47 u	Dec. '52	1.48	3.8	4.2	4.3
Pl-14	Texas Ill. Nat. Gas P. Co.	5-25-53	956,250	16,495	2-2/3	86 1/	18-7/8 b	17.25	.07	17.18	Feb. '53	1.29	6.8	7.5	7.5
Pl-15	Northern Natural Gas Co.	5-25-54	365,400	13,885	9	100	41-1/2	38.00	.29	37.71	Mar. '54	2.91	7.0	7.7	7.7
Pl-16	Transco. Gas P.L. Corp.	10-1-56	441,250	7,060	16	100	17-1/8 b	16.00	.54	15.46	June '56	1.24	6.9	7.8	8.0
Pl-17	Northern Natural Gas Co.	1-28-58	456,813	21,813	5	100	51-1/2	47.75	.75	47.00	Sept.'57	3.69	7.2	7.7	7.9

Footnotes

n.a. - Not available b- Bid price u Reflects also proceeds and expenses related to sale of the unsubscribed shares.

1/ Peoples Gas Lt. & Coke Co. purchased all the unsubscribed shares at the subscription price.

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DATA RELATIVE TO THE TEN NATURAL GAS PIPE LINE COMPANIES

Colorado Interstate Gas Company
El Paso Natural Gas Company
Mississippi River Fuel Corporation
Northern Natural Gas Company
Panhandle Eastern Pipe Line Company
Southern Natural Gas Company
Tennessee Gas Transmission Company
Texas Eastern Transmission Corporation
Texas Gas Transmission Corporation
Transcontinental Gas Pipe Line Corporation

(2302)

COLORADO INTERSTATE GAS COMPANY

Colorado Interstate Gas Company was incorporated in Delaware in 1928. Effective January 1, 1952, it merged with Canadian River Gas Company, a subsidiary which had been its chief source of natural gas. The Company operates a pipe line network of 3,470 miles from the Texas Panhandle and Kansas Hugoton gas fields to Denver, and an extension completed in January, 1957, through Wyoming, connecting with the Pacific Northwest line at Green River. The transmission compressor capacity at the end of 1958 was 104,845 HP. There are two subsidiaries: Natural Gas Producers, Inc., which supplies gas to, at wholesale, Brush and Sterling in northeastern Colorado; and Colorado Oil and Gas Corporation, which develops oil and gas properties.

In 1958 Colorado produced about 40 percent of its gas and purchased the remainder from various field suppliers. About 81 percent of the gas is sold to other gas utilities, among whom the principal customers are Public Service Company of Colorado and Natural Gas Pipeline Company of America. The remainder of the gas is sold to industrial consumers and various public authorities. The chief main-line industrial consumers are: Public Service Company of Colorado, Colorado Fuel and Iron Corporation and Ideal Cement Company.

As of December 31, 1958, Colorado estimated that it owned, or controlled by contract, a total of approximately 7.8 trillion cubic feet of natural gas.

COMMON STOCK - Outstanding December 31, 1958 - 1,753,383.6 ($5 par value shares).
Market - Over-the-Counter
Number of Common stockholders - 6,066 as of December 31, 1958.

		Per Share of Common Stock									
	Operating Revenue (Millions) 1/	Earnings 1/	Dividends 2/	Pay-Out %	Market Price				Yield* %	Year End Book Value	Earnings Price Ratio #
Year (a)	(b)	(c)	(d)	(e)	High (f)	Low (g)	Average (h)	Close (i)	(j)	(k)	(l)
1946	$ 6.96	$1.22	--	--	--	--	--	--	--	--	--
1947	8.50	1.51	--	--	--	--	--	--	--	--	--
1948	11.26	1.46	--	--	--	--	--	--	--	--	--
1949	12.68	1.49	$0.78	52.3	--	--	--	--	--	--	--
1950	15.72	1.67	0.91	54.5	--	--	--	--	--	--	--
1951	18.17	1.88	1.00	53.2	--	--	--	--	--	$13.67	--
1952	17.23	1.51	1.25	82.8	$34-3/4	$24-7/8	$29.81	$32-3/4B	4.2	13.83	--
1953	17.95	1.45	1.25	86.2	40	29-3/4	34.88	37-1/2B	3.6	14.03	4.6
1954 3/	27.88	1.45	1.25	86.2	51-3/4	37-3/8	44.56	50-3/4B	2.8	15.48	4.0
1955 3/	31.89	1.73	1.25	72.3	68-1/4	50	59.13	53-3/4B	2.1	19.65	5.0
1956 3/	36.12	1.87	1.25	66.8	77-1/2	54	65.75	74 B	1.9	16.57	7.7
1957 3/	49.34	2.24	1.25	55.8	81-1/2	33-3/8	57.44	36-1/4B	2.2	18.09	8.2
1958 3/	54.71	2.30	1.25	54.3	59	36-1/2	47.75	54-1/4B	2.6	17.87	6.6
1959			1.25		58-3/4	40-1/2	49.63	42-3/4B	2.5		5.3
1960											

* Based on average price. # Average of 12 month-end earnings-price ratios. B - bid price.

1/ Pro forma, combined earnings of constituent companies, after giving effect to elimination of intercompany transactions and reduction of gasoline sales and Federal income taxes. (Years 1946-1951)

2/ Equivalent to the dividends paid by the former Colorado Interstate Gas Co. on 1,250,000 no-par common shares, 1949, 1950 and 1951.

3/ Adjusted for retroactivity of the 1958 rate settlement, and in 1958 for retroactivity from Feb. 5, of the negotiated rate settlement offered in January, 1959.

Sources: Moody's Public Utility Manuals and Supplements; Standard & Poor's Corporation Descriptions; Company's Annual Report to the FPC (Form 2); Company's Annual Report to Stockholders.

(5907)

(2303)

El Paso Natural Gas Co. (Del.)

El Paso Natural Gas Co. (Del.) was incorporated in Delaware in 1[illegible]. The company and its 99.[illegible]% controlled Pacific Northwest Pipe Line Company form the largest natural gas pipeline system in the country. The combined 10,909 mile network fans out from the San Juan basin of New Mexico and West Texas to serve all of the far western states. Extensive allied interests include oil production, refining and marketing, exploration and development and the manufacture of petrochemicals.

El Paso acquired Pacific Northwest by an exchange of shares of its Common B Stock for the Common stock of Pacific Northwest, effective January 31, 1957. Beginning January 1, 1958, Common B stock automatically became Common stock without dividend restrictions. El Paso owns a 99.4% interest in Utah Natural Gas Co. which draws gas from the Clear Creek, Utah, field and delivers it to Mountain Fuel Supply Company. It also owns a 28% interest in Rare Metals Corporation of America, engaged in uranium mining, and, has a 14% ownership in Western Natural Gas Company.

The company purchases the bulk of its supply under long-term contracts with suppliers in the Permian and San Juan Basins, and in the Texas Panhandle. El Paso expects to benefit from the marketing of increasing quantities of gas expected to be available from Canadian sources through Pacific Northwest. Among the important utility customers are: Southern Counties Gas Company, Southern California Gas Company; Pacific Gas & Electric Co.; Arizona Public Service Co.; Natural Gas Service Co., Nevada Natural Gas Pipe Line Co.; Southern Union Gas Co. and Tucson Gas Electric Light & Power Co. The industrial customers include several prominent copper companies.

During 1958, 71% of El Paso's consolidated operating revenues of $368,300,000 was derived from sale of gas to other gas utilities, 5.2% was from sales to industrial customers, and the balance came from other sources, including sale of extractive products.

As of December 31, 1958, El Paso estimated its owned natural gas reserves at 9.1 trillion cubic feet, in addition to which it had about 20.0 trillion cubic feet available under contract.

COMMON STOCK - Outstanding December 31, 1958 - 17,022,583 Common Shs. ($3 par value).
Market - New York, Midwest and Pacific Coast exchanges.
Number of Common shareholders - 51,835.

Per Share of Common Stock 1/

Year (a)	Operating Revenue (Millions) (b)	Earnings (c)	Dividends (d)	Pay-Out % (e)	Market Price High (f)	Market Price Low (g)	Market Price Average (h)	Market Price Close (i)	Yield* % (j)	Year End Book Value (k)	Earnings Price Ratio # (l)
1945	$ 8.91	$0.58	$0.40	69.0	$ 8-1/8	$ 5-5/8	$ 6.88	$ 7-3/4	5.8	$ 3.39	9.0
1946	9.21	0.63	0.40	63.5	10-1/4	7-3/8	8.81	8-3/4	4.5	3.93	6.4
1947	11.71	0.87	0.40	46.0	10	7-3/4	8.88	9-7/8	4.5	4.34	7.9
1948	23.85	1.18	0.40	33.9	13-3/4	9-1/8	11.44	11-3/8	3.5	5.03	8.7
1949	29.44	0.96	0.60	62.5	14-1/2	11-7/8	13.19	13-7/8	4.5	5.55	6.8
1950	39.95	1.16	0.62	53.4	14-3/8	10-3/4	12.56	11-7/8	4.9	6.63	7.3
1951	63.55	1.53	0.80	52.3	19-1/8	11-7/8	15.50	18-1/2	5.2	8.82	9.0
1952	78.05	1.48	0.80	54.1	19-1/8	15-1/2	17.31	16-1/2	4.6	9.55	8.5
1953	111.14	1.75	0.80 2/	45.7	16-5/8	15	16.81	17-3/4	4.8	11.94	8.3
1954	143.84	0.95	1.00	105.3	20-7/8	17-5/8	19.25	20-3/4	5.2	12.17	7.2
1955	179.45	1.53	1.00	65.4	27-1/4	19-7/8	23.56	24	4.2	12.89	4.7
1956	221.52	2.11	1.07	50.7	31-1/2	21-1/2	26.50	31-1/8	4.0	14.66	6.8
1957	301.09	1.65	1.30	78.8	44-3/8	24	34.19	26-3/8	3.8	13.37	6.7
1958	368.30	1.61	1.30	80.7	39-1/4	27	33.13	36	3.9	14.11	5.9
1959			1.30		39	28	33.50	31-1/?	3.9		4.7

* Based on average price. # Average of 12-month-end earnings-price ratios.

1/ Adjusted for 2-for-1 stock split in 1951 and 3-for-1 split in 1949.
2/ Plus 1/90 share of Western Natural Gas Common Stock which at 3-24-53 had market value of approximately 21 cents.

Source: Moody's Public Utility Manual and Supplements; Company's Annual Report to Stockholders; Company's Annual Report to SEC (Form 2); Standard & Poor's Stock Guide and Corporation Descriptions.

[illegible] Mississippi [illegible] and the remaining 40 [illegible] in its service [illegible] supply natural gas from [illegible] and Louisiana fields [illegible] St. Louis area. [illegible] [illegible] about [illegible] miles of [illegible] [illegible] about [illegible] miles of [illegible] [illegible] [illegible]

[illegible] Paul, [illegible] Minneapolis, [illegible]

Northern has two active subsidiaries: Northern [illegible] and [illegible] Iowa for the purpose of [illegible] owned, Minnesota Northern's [illegible] Northern entitled system [illegible] million cubic feet controlled by [illegible] Indirect [illegible] cubic feet, controlled by [illegible]. Delivery facilities of the system include approximately [illegible] miles of pipeline and compressor stations having 54,[illegible] horsepower.

Through [illegible] Northern serves 117 communities and 8,900 customers at retail, through its complex natural gas [illegible] Principal sources of revenues are sales to other gas utilities and main line industrial gas sales. In 1958 sales of other gas utilities accounted for about 60% of gas sales by volume, and 38% of gas sales revenues. Industrial sales accounted for 13% of gas sales by volume and 11% of gas sales revenues.

Capitalization - Outstanding December 31, 1958 - 5,436,470 shares ($10 par value).
Number of stockholders - approximately 21,756.
Market - New York Stock Exchange, Midwest Stock Exchange.

Per Share of Common Stock 1/

Year (a)	Operating Revenues (Millions) (b)	Earnings (c)	Dividends (d)	Payout % (e)	Market Price: High (f)	Low (g)	Average (h)	Close (i)	Yields % (j)	Year End Book Value (k)	Earnings Price Ratio % (l)
1945	$17.16	$1.[illegible]	$0.63	[illegible]	$11-7/8	$ 8-5/8	$10.25	$11-5/8	6.1	$ 7.08	9.8
1946	19.27	1.34	0.75	56.0	14-1/8	11-1/8	12.63	14-1/4	5.8	7.79	9.8
1947	23.27	1.82	0.80	43.[illegible]	15-3/8	11-3/4	13.44	14-3/4	6.0	8.22	11.0
1948	26.85	1.56	0.90	57.7	18-1/8	13-1/8	15.50	18-1/8	5.8	9.31	9.9
1949	29.30	1.25	0.90	72.0	20	15-1/2	17.75	17-1/2	5.1	10.56	6.8
1950	33.18	1.07	0.90	84.1	24-7/8	14-1/2	17.20	18-5/8	5.3	11.23	7.8
1951 2/	37.27	1.32	.90	68.2	20	15-3/8	17.81	17-7/8	5.1	11.44	5.7
1952 2/	39.55	1.[illegible]	.90	62.8	19-5/8	14-5/8	17.63	19-1/4	4.8	12.24	4.0
1953 2/	43.33	1.[illegible]	.[illegible]	62.2	23-1/8	17-1/4	20.21	22-1/4	4.4	13.07	4.9
1954	50.[illegible]	1.[illegible]	.[illegible]	[illegible]	28-7/8	17	[illegible]/6	22-3/4	4.7	13.87	6.2
1955	100.[illegible]	2.87	1.[illegible]	55.[illegible]	30-1/8	20[illegible]	23.69	22-1/8	4.7	15.08	7.0
1956	[illegible].30	1.[illegible]	1.20	[illegible]	24-3/8	21-3/4	23.94	23	5.2	15.65	7.9
1957	118.[illegible]	1.[illegible]	1.[illegible]	[illegible]	24-1/4	16-3/4	20.[illegible]	24	5.0	16.34	7.0
1958	135.63	1.12	1.20	107.[illegible]	24-3/8	19-3/4	[illegible].08	24	5.0	17.17	5.2
1959			1.40		35-3/4	25	31.38	28-1/2	4.4		5.5

a Dates or average price.
b Average of 12 month-end years price ratios.

1/ Adjusted for 4-for-3 stock splits in [illegible] and 1958.
2/ Adjusted to reflect rate increases granted.

Sources: Moody's Public Utility Manuals and Cumulative Supplements, Standard & Poor's Stock Guide and Corporation Records; Annual reports to Stockholders and Annual Reports to SEC, Form 2.

(2306)

PANHANDLE EASTERN PIPE LINE COMPANY

Panhandle Eastern Pipe Line Company was incorporated in Delaware in 1929 as Interstate Pipe Line Co., the present title was adopted in 1930. The Company produces, purchases, transports and sells natural gas obtaining the greater portion of its supply from the Amarillo field in the Panhandle of Texas and the Kansas Hugoton fields, and selling it principally to other gas utilities in Kansas, Missouri, Illinois, Indiana, Ohio and Michigan. Panhandle's transmission system extends from its southwestern supply points as far north as Sarinaw, Michigan, a distance of approximately 1,300 miles. The line is looped almost its entire length and the system contains, all told, approximately 6,300 miles of various sizes of gathering, main and lateral lines. Trunkline Gas Co., 100% owned, owns and operates a supplementary supply line, about 1,400 miles long, which taps the Gulf Coast Fields of Louisiana and Texas, and connects with Panhandle's line at Tuscola, Illinois. In 1958 Panhandle produced about 22% of its gas intake and purchased the remainder. As of December 31, 1958, Panhandle estimated gas reserves, owned or controlled by itself and Trunkline, to be in excess of 12 trillion cubic feet.

About 88% of the gas transported is sold to other utilities for resale. Panhandle supplies about 60 utilities or municipalities distributing gas at retail and estimates that it is thus serving, indirectly, about 4,000,000 domestic customers. It also supplies directly about 5 industrial consumers. Panhandle owns a 25% interest in Michigan Gas Storage, which purchases gas from Panhandle and sells it to Consumers Power Co., owning the other 75%. In December 1957, Panhandle exchanged its 40% stock interest in National Petro Chemicals Corporation for 1,500,000 shares (14.3%) of National Distillers and Chemical Corporation common stock.

COMMON STOCK - Outstanding December 31, 1958 - 6,765,744 no par value shares.
Number of stockholders - approximately 13,000.
Market - New York Stock Exchange

		Per Share of Common Stock 1/									
Year (a)	Operating Revenue (Millions) (b)	Earnings (c)	Dividends (d)	Pay-Out % (e)	Market Price High (f)	Low (g)	Average (h)	Close (i)	Yield* % (j)	Year End Book Value (k)	Earnings Price Ratio #
1945	$ 24.00	$1.07	$0.50	46.7	$10	$ 6-7/8	$ 8.43	$ 9-5/8	5.9	$ 8.71	12.1
1946	27.68	1.10	0.62	56.4	14-1/8	9-3/8	11.75	11-3/8	5.3	9.99	9.4
1947	35.43	1.13	0.75	66.4	13-3/4	10-1/4	12.00	13-3/8	5.3	8.37	9.4
1948	34.15	1.18	0.75	63.6	16-1/2	11-1/2	14.00	12-5/8	5.4	8.45	9.3
1949	36.42	1.27 2/	0.81 2/	68.1	19-3/8	12-3/8	15.88	18-5/8	5.1	7.58	8.4
1950	41.37	1.33	1.00	75.2	24-7/8	17-1/4	21.06	20-7/8	4.7	7.71	6.3
1951	52.30	1.51	1.00	66.2	31	20	25.50	29-3/4	3.9	8.12	5.9
1952	91.82	2.50	1.25 2/	50.0	44-3/4	29-7/8	35.81	40-1/2	3.5	9.42	6.9
1953	95.14	2.47	1.25	50.6	44-3/8	34-1/4	39.31	35	3.2	10.96	6.3
1954	87.16	2.13	1.25	58.7	42-3/8	33-1/2	37.94	37-3/4	3.2	10.85	5.7
1955	98.80	2.50	1.44	57.6	44	35-1/4	39.63	39-1/8	3.6	11.29	6.3
1956	112.65	2.75	1.50	54.5	53-1/4	37	45.13	52-1/2	3.3	12.84	5.9
1957	117.14	2.74	1.80	65.7	56-1/2	36	46.25	37-1/4	3.9	14.10	5.8
1958	120.73	2.74	1.80	65.7	62-1/4	37	49.63	58-3/4	3.6	15.32	5.4
1959			1.80		59-1/4	43	51.13	47	3.5		6.4

* Based on average price. # Average of 12 month-end earnings-price ratios.

1/ Adjusted for 2-for-1 stock splits in 1945, 1949 and 1956.
2/ Plus Stock Dividend.
3/ Adjusted to $1.19 to reflect additional cost of gas resulting from orders of State Corporation Commissions of Kansas and Oklahoma.

Source: Moody's Public Utility Manual & Supplements; Standard & Poor's Stock Guide, Listed Stock Reports and Corporation Descriptions; Company's Annual Report to Stockholders; Company's Annual Report to FPC (Form 2);

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Southern Natural [illegible] in 1946, [illegible] Natural Gas Corporation, in [illegible] 1947. It owns and operates [illegible] gas which transports gas from producing fields in Louisiana, [illegible] Mississippi, Alabama, Georgia and South Carolina. In 1952 its [illegible], a former subsidiary, sold its properties to Mississippi Valley Gas Company and was liquidated. In 1955 Southern distributed its holding of Alabama Gas Corporation, [illegible] shareholders, [illegible] Southern Common stock. In 1955 Apex Gas Company sold all of its properties and was liquidated and dissolved. On November 1, 1956 Southern acquired a majority interest in the Offshore Company. Offshore is engaged in the business of drilling oil and gas wells under contract for others, specializing in operations on submerged lands off the Gulf Coast of the United States.

Physical facilities of Southern Natural include two main transmission lines, running approximately parallel one to the other, but about 50 miles apart. The North line extends from the Monroe field in northeast Louisiana, east about 460 miles to Atlanta, Georgia. The South line extends from fields in Mississippi and southeast Louisiana, east about 610 miles to Savannah, Georgia. The system as a whole comprises about 4,800 miles of pipe. Compressor stations have an aggregate installed capacity of 183,224 HP. In 1958 gas service revenues totaled $91,735,000; of this 74 percent represented sales of gas for resale, the balance represented direct industrial sales. Southern purchases about 92 percent of its gas requirements from producing companies and from United Gas Pipe Line Co. Southern estimates that the controlled gas reserves connected, or to be connected, to the system as of the end of 1958 were of the order of 7 trillion cubic feet.

COMMON STOCK - Outstanding December 31, 1958 - 4,950,485 shares ($7.50 par value).
Reserved for conversion of the convertible debenture 4-1/2s due 1973 - 52,700 shares.
Market - New York Stock Exchange.
Number of stockholders December 31, 1958 - 23,200.

Per Share of Common Stock 1/ 2/

Year (a)	Operating Revenue (Millions) (b)	Earnings (c)	Dividends (d)	Pay-Out % (e)	Market Price High (f)	Market Price Low (g)	Market Price Average (h)	Market Price Close (i)	Yield* % (j)	Year End Book Value (k)	Earnings Price Ratio # (l)
1945	$ 13.14	$1.22	$0.63	51.6	$12-3/8	$ 9-1/2	$10.44	$12 [illegible]	6.0	$ 8.78	9.4
1946	13.67	1.13	0.69	61.1	16-7/8	11-1/8	14.06	12-7/8	4.9	10.03	9.2
1947	14.27	1.14	0.75 3/	65.8	14	11	12.50	12	6.0	9.43	10.8
1948	17.89	1.42	0.88	62.0	15-1/8	10	12.56	14-5/8	7.0	9.92	10.7
1949	22.48	1.44	1.00	69.4	18-3/8	14-1/8	16.25	17-7/8	6.2	10.55	9.6
1950	27.14	1.72	1.00	62.8	20	15-1/4	17.63	18	6.1	11.54	9.7
1951	35.47	2.14	1.25	58.4	25-1/2	17-7/8	21.69	24-3/8	5.8	12.86	9.6
1952	39.43	1.97	1.33	67.5	30-1/2	23-7/8	27.19	29-3/8	4.9	14.02	8.4
1953	48.33	2.06	1.40 4/	68.0	33-3/4	23	28.38	29-1/4	4.9	12.89	8.2
1954	59.23	1.89	1.55	82.0	32-7/8	28-1/4	30.56	32	5.1	13.35	6.5
1955	69.33	2.37	1.65	69.6	36-5/8	31-1/8	33.88	34-3/4	4.9	16.10	7.2
1956	79.93	2.35	1.85	78.7	39-7/8	33-3/4	36.81	39-7/8	5.0	20.08	7.3
1957	101.15	2.35	2.00	85.1	49-1/4	29-1/2	39.38	32-1/4	5.1	21.79	6.9
1958	104.38	2.40 5/	2.00	83.3	44-1/4	33	38.63	42	5.2	22.47	6.9
1959			2.00		46-3/4	34-1/4	40.50	35-5/8	4.9		5.7

* Based on average price. # Average of 12 month-end earnings-price ratios.

1/ Consolidated; 1956 and prior years is for Company only.
2/ Adjusted for 2-for-1 stock split in 1952.
3/ Also dividend of 1/2 share of Southern Production Co. Inc. paid 7-28- [illegible], for each share of Southern Natural Gas Co. held. (Equivalent to one share before stock split in 1952).
4/ Also .2306 shares of common of Alabama Gas Corp. for each share of Southern Natural Gas Co.
5/ Includes $0.45 per share net profit on sale of securities.

Source: Moody's Public Utility Manual and Supplements; Company's Annual Report to Stockholder Company's Annual Report to the FPC (Form 2); Standard & Poor's Stock Reports, Stock Guide and Corporation Descriptions.

(5904)

1/ Adjusted for stock dividends of 20% in March, 1958, 33-1/3% in 1955, 20% in 1952, 25% in 1951 and 1949; 33-1/3% in 1948 and 7-for-1 split in 1946. Consolidated after 1949; reflects 1957 rate settlement after 1956; includes Middle States and Hartol Petroleum Corps. after 1956.

[illegible]

[illegible] Affiliated enterprises include [illegible] Texas Eastern Transmission Corporation, 1,000 miles, which taps gas fields in southwestern Texas and delivers gas to [illegible] Eastern at Leidy, Texas; Texas Eastern-Penn Jersey Transmission Corp., 1,000 miles, which links the eastern storage field with Texas Eastern's main line transmission system in Kentucky, West Virginia, and Pennsylvania, and other facilities, [illegible] Transmission Co., in which Texas Eastern has a [illegible] interest, which transports gas from Seminole and delivers it to distribution companies in New England. Texas Eastern Production Co., formerly a subsidiary, was merged in 19[illegible].

Texas Eastern purchases most of its gas from Texas and Louisiana producers and sells it to other gas utilities, including municipal systems. In 19[illegible] its largest customers were the [illegible] System, Consolidated Natural Gas System, Algonquin Gas Transmission Co., Texas Illinois Gas Division of [illegible], and Texas Gas Transmission Corporation. There were also [illegible] others.

COMMON STOCK - Outstanding December 31, 19[illegible] - [illegible] shares ($1 par value).
Reserved for conversion of the Convertible Preferred - [illegible] shs.
Market - Over-the-Counter.
Number of Common shareholders December 31, 19[illegible] - approximately [illegible].

Per Share of Common Stock

Year (a)	Operating Revenue (Millions) (b)	Earnings (c)	Dividends (d)	Payout (e)	Market Price (f)				Yield (g)	Book Value (h)	Earnings Price Ratio (i)
1947 2/	$ [illegible]	[illegible]	--	--	[illegible]	[illegible]	[illegible]	[illegible]	--	[illegible]	--
1948	3[illegible]	[illegible]	--	--	[illegible]	[illegible]	[illegible]	[illegible]	--	[illegible]	--
1949	[illegible]	[illegible]	--	--	[illegible]	[illegible]	[illegible]	[illegible]	--	[illegible]	--
1950	73.87	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	[illegible]	[illegible]
1951	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1952	93.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1953	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1954	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1955	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1956	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1957	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1958	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1959	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		1.40			34-1/2	26-5/8	31.76	28	8	4.4[illegible]	7.0

1/ Based on asked price. H - High. L - Low. C - Close. Bid-price information. B - Bid price.

2/ Eight months ended December 31.

3/ Restated to [illegible], 41.[illegible], 31.[illegible], 1.[illegible] and 1.[illegible] for the years 19[illegible], 1948, 19[illegible], 1950 and 1951 respectively.

4/ Plus 6% share for each [illegible] held.

Sources: Moody's Public Utility Manual and [illegible]

Organized in 1945, Texas Gas Transmission Corporation owns and operates a pipeline system for the transportation and sale of natural gas. It acquired through merger to Memphis Natural Gas Company and Kentucky Natural Gas Corporation, its major predecessor enterprises which have been operating since 1926. Its present system reaches into the Carthage Gas Field in East Texas, and into the Monroe, Liston and other Louisiana fields, and extends northward, following the routes of the Mississippi and Ohio Rivers, as far as Middletown, Ohio. A branch follows the Wabash as far as Terre Haute, Indiana. A wholly-owned subsidiary, Texas Gas Exploration Corporation, explores for and develops oil and gas reserves. In 1955 two of Texas Northern Gas Co. and Louisiana Natural Gas Co., two subsidiaries which had previously operated field gathering systems. As of the end of 1958 the system consisted of 3,714 miles of pipeline, compressor stations having an aggregate installed capacity of 198,900 HP; and other operating facilities. Several depleted fields in Indiana and Kentucky have been developed for storage purposes.

Texas Gas purchases its gas from various suppliers, including its subsidiary and other pipelines. It sells this gas to about 70 other gas utilities, including distribution companies, municipalities and other pipeline companies, and to approximately 13 major industrial customers. In 1958 over 92 percent of gas service revenues of $100,520,914 represented sales to other gas utilities; the balance was derived from direct industrial sales.

At the end of 1958, Texas Gas estimated the gas reserves dedicated to it under its contracts with various suppliers at 0.4 trillion cubic feet.

COMMON STOCK - Outstanding December 31, 1958 - 2,929,833 - $5 par value shares.
Number of common stockholders - 16,993.
Market - New York, Midwest and Pacific Coast Stock Exchanges.

Note: Approximately 26 percent of the common stock is controlled, directly or indirectly, by Mr. J. H. Hillman, Jr., Chairman of the Board of Texas Gas, and members of his family.

Per Share of Common Stock 1/

Year (a)	Operating Revenue (Millions) (b)	Earnings (c)	Dividends (d)	Pay-Out % (e)	Market Price High (f)	Market Price Low (g)	Market Price Average (h)	Market Price Close (i)	Yield* % (j)	Year End Book Value (k)	Earnings Price Ratio* (l)
1948	$ 9.53	$0.60	—	—	$11-3/4	$ 7-5/8	$ 9.68	$10 B	—	$ 5.97	—
1949	9.98	0.73	—	—	14-3/4	9-3/8	13.06	14-3/4B	—	7.35	6.0
1950	30.86	1.77	—	—	17	12-1/4	14.62	14-1/2B	—	9.62	6.1
1951	43.39	1.63	—	—	16-3/4	14-1/2	15.62	15-1/2B	—	10.86	10.6
1952	47.45	1.03	$0.91	88.3	17-1/8	14-1/4	15.69	15 B	5.8	11.31	9.4
1953	63.33	1.47	0.91	61.9	15-5/8	13-1/4	13.44	15-1/4B	6.8	11.64	8.2
1954	68.16	1.54	0.92	59.7	20-3/8	15-5/8	18.00	18-1/4B	5.1	12.60	8.4
1955	77.13	1.67	0.94	56.3	23-3/4	19-1/8	21.44	21 B	4.4	13.56	7.2
1956	80.36	2.13	0.96	45.1	24	20-1/4	22.12	19-1/2B	4.3	14.60	8.8
1957 2/	94.30	1.83	0.98	53.6	23-1/2	16-1/4	19.88	16-1/4B	4.9	17.38	10.3
1958	104.16	2.06	1.00 3/	48.5	32	16-5/8	24.31	32 B	4.1	18.79	8.4
1957			1.25		35-1/4	27-1/8	31.19	29-3/4	4.0		6.3

* Based on average price. B - Bid price.
# Average of 12 month-end earnings-price ratios.

1/ Adjusted for stock dividends of 2% each in 1953 through 1958.
2/ Restated to reflect rate settlement in 1958.
3/ Plus 2% in stock.

Source: Moody's Public Utility Manual and Supplements, Standard's Over-the-Counter Stock Reports, F.P.C. Form No. 2 and Annual Report to Stockholders.

(5906)

Transcontinental Gas Pipe Line Corporation was incorporated in Delaware in 1 . . . succeeding Trans-Continental Gas Pipe Line Co., Inc., a Texas corporation, existing since . . . company owns and operates a system for the transportation of natural gas extending from the Gulf Coast regions of Texas and Louisiana in a northeasterly direction as far as the New York City metropolitan area. Operations commenced March 1, 1951. The physical facilities include over 5,300 miles of pipeline of which over 3,200 miles are 30 inch diameter pipe, or over; compressor stations with an aggregate rated capacity of approximately 474,420 HP, and other operating appurtenances. The company has access to the Oakford Storage Field, near Pittsburgh, Pa.

Gas is purchased under long-term contracts with numerous field suppliers and sold at wholesale mainly to gas distributing utilities in New York City and on Long Island, New Jersey, eastern Pennsylvania and at various points along the line in Alabama, Georgia, the Carolinas, Virginia and Maryland. During 1958 over 94% of operating revenues of $115,470,000 represented sales to other gas utilities; the larger of such purchasers were: Consolidated Edison Co. of New York, Inc., Public Service Electric and Gas Co., serving New Jersey, and Brooklyn Union Gas Company. A few industrial consumers are supplied directly. Natural gas reserves dedicated to Transcontinental under its contracts with its suppliers were estimated by Transcontinental at 7.8 trillion cubic feet as of December 31, 1958.

COMMON STOCK - Outstanding December 31, 1958 - 9,953,842 shares ($5 par value).
Market - Over-the-Counter.
Number of Common stockholders - 39,504

		Per Share of Common Stock 1/									
Year (a)	Operating Revenue (Millions) (b)	Earnings (c)	Dividends (d)	Pay-Out % (e)	Market Price High (f)	Market Price Low (g)	Market Price Average (h)	Market Price Close (i)	Yield* % (j)	Year End Book Value (k)	Earnings Price Ratio # (l)
1949	-	-	-	-	$ 9	$ 5-3/4	$ 7.38	$ 8-5/8B	-	$ 3.56	-
1950	-	-	-	-	10-3/8	7-1/4	8.81	8-1/4B	-	4.03	-
1951	$ 39.30	$0.62 2/	-	-	10-7/8	7-3/4	9.31	8-5/8B	-	5.16	-
1952	51.80	0.56 3/	$0.16	28.6	10-1/2	8-1/2	9.50	10-1/8B	1.7	6.14	6.2
1953	59.03	0.82	0.64	78.0	10-3/4	8-3/4	9.75	10-1/8B	6.6	6.22	6.5
1954	62.38	0.92	0.64	69.6	12-3/8	10-1/8	11.25	12-1/4B	5.7	6.03	8.1
1955	74.69	1.05	0.64	61.0	17-5/8	12-1/8	14.88	16-3/4B	4.3	6.51	6.7
1956	88.33	1.20	0.84	70.0	17-1/4	14-3/4	16.00	15-3/4B	5.3	7.31	6.9
1957	96.80	1.36	0.91	66.9	18-7/8	15-3/4	17.31	16-1/8B	5.3	8.92	8.0
1958	115.47	1.40	1.00	71.4	24-7/8	16-5/8	20.75	24-3/4B	4.8	10.49	6.9
1959			1.00 4/		26-1/2	21-1/4	23.88	21-7/8B	4.2		6.2

* Based on average price. B- Bid price.
\# Average of 12 month-end earnings-price ratios.

1/ Adjusted for 2-for-1 split in 1956 and 10% stock dividend in 1957.

2/ After deducting $0.66 per share for charge in lieu of tax.

3/ After deducting $0.61 per share for charge in lieu of tax.

4/ Plus 20% in stock.

Source: Moody's Public Utility Manual and Supplements; Standard & Poor's Stock Guide, Stock Reports and Corporation Descriptions; Company's Annual Report to Stockholders; Company's Annual Report to the FPC (Form 2).

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TEN COMPANIES - 1945 to 1958 1/

Year	AMOUNT Long-Term Debt (000)	Preferred Stock (000)	Common Equity (000)	Total (000)	PERCENT Long-Term Debt	Preferred Stock	Common Equity
1945	$ 154,183	$ 24,682	$116,706	$ 295,571	52	8	40
1946	200,215	33,214	139,476	372,905	54	9	37
1947	403,171	45,401	188,741	637,313	63	7	30
1948	605,134	47,190	236,456	888,780	68	5	27
1949	853,373	90,092	337,941	1,281,406	67	7	26
1950	1,013,187	135,885	401,466	1,550,538	65	9	26
1951	1,218,010	166,212	477,058	1,861,280	65	9	26
1952	1,390,275	227,812	533,905	2,151,992	65	10	25
1953	1,606,454	278,417	639,196	2,524,067	64	11	25
1954	1,837,174	316,076	721,566	2,874,816	64	11	25
1955	1,962,324	341,312	802,743	3,106,379	63	11	26
1956	2,135,509	352,621	912,298	3,390,428	63	10	27
1957	2,903,615	521,303	1,054,677	4,479,625	65	11	24
1958	3,209,059	592,975	1,207,974	5,010,008	64	12	24

1/ Includes El Paso Natural Gas Co., Northern Natural Gas Co., Panhandle Eastern Pipe Line Co., Southern Natural Gas Co. and Tennessee Gas Transmission Co. from 1945; Texas Eastern Transmission Corp. and Texas Gas Transmission Co. from 1947; Colorado Interstate Gas Co. from 1948; Mississippi River Fuel Corp. and Transcontinental Gas P. L. Corp. from 1949. Data is as of December 31.

TEN COMPANIES - December 31, 1958

Company	Long-Term Debt Amount (000)	Long-Term Debt Percent	Preferred Stock Amount (000)	Preferred Stock Percent	Common Stock and Surplus Amount (000)	Common Stock and Surplus Percent	Total Amount (000)
Colorado Interstate Gas Co.	$ 82,651 1/ 2/	65.95	$ 11,000	8.78	$ 31,669	25.27	$ 125,320
El Paso Natural Gas Co.	882,385 2/	68.67	164,076	12.77	238,557	18.56	1,285,018
Miss. River Fuel Corp.	60,450	51.20	--	--	57,623	48.80	118,073
Northern Natural Gas Co.	235,872 2/	56.57	42,868	10.28	138,246	33.15	416,986
Panhandle East. P. L. Co.	154,002 2/	60.02	10,412	4.06	92,153	35.92	256,567
Southern Natural Gas Co.	163,151 2/	61.97	--	--	100,103	38.03	263,254
Tennessee Gas Transm. Co.	678,962 2/	61.29	175,650	15.86	253,069	22.85	1,107,681
Texas East. Transm. Corp.	503,632 2/	66.01	108,381	14.21	150,936	19.78	762,949
Texas Gas Transm. Co.	105,822 2/	62.36	15,200	8.96	48,682	28.68	169,704
Transco Gas P. L. Corp.	342,132 2/	67.82	65,388	12.96	96,936	19.22	504,456
Total	$3,209,059	64.05	$592,975	11.84	$1,207,974	24.11	$5,010,008

1/ Includes $40,000,000 bank loans.

2/ Includes Reserve for Deferred Federal Income Tax for:

Colorado Interstate Gas Co.	$ 95,000	Tennessee Gas Transm. Co.	$11,983,000
El Paso Natural Gas Co.	14,878,000	Texas East. Transm. Corp.	18,218,000
Northern Natural Gas Co.	7,000,800	Texas Gas Transm. Co.	7,852,185
Panhandle East. P. L. Co.	9,386,763	Transco Gas P. L. Corp.	10,915,501
Southern Natural Gas Co.	13,821,000		

Source: Moody's Public Utility Manuals and Supplements.

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CAPITAL PARTS OF THE PRINCIPAL NATURAL GAS PIPELINE COMPANY 1945 TO DATE

	Long-Term Debt	Pfd. Stock	Common Equity	Long-Term Debt	Pfd. Stock	Common Equity	Long-Term Debt	Pfd. Stock	Common Equity	Long-Term Debt	Pfd. Stock	Common Equity
	Colo. Int. Gas Co. 1/			El Paso Natural Gas Co.			Miss River Fuel Corp.			Northern Nat. Gas Co.		
1945	-	-	-	46	6	48	-	-	-	46	-	54
1946	-	-	-	65	11	24	-	-	-	44	-	56
1947	-	-	-	69	11	20	-	-	-	50	-	50
1948	51	8	41	78	7	15	-	-	-	52	-	48
1949	60	6	34	78	9	13	58	-	42	44	-	56
1950	57	6	37	78	9	13	44	-	56	56	-	44
1951	54	4	42	67	12	21	57	-	43	56	-	44
1952	62	-	38	67	14	19	56	-	44	55	-	45
1953	53	-	47	65	13	22	54	-	46	55	10	35
1954	59	12	29	64	14	22	46	-	54	59	9	32
1955	54	11	35	64	13	23	48	-	52	57	9	34
1956	48	11	41	64	13	23	50	-	50	54	9	37
1957	68 2/	9	23	68 2/	12	20	51	-	49	58 2/	12	30
1958	66 2/	9	25	69 2/	13	18	51	-	49	57 2/	10	33
1959												
	Panhandle E.P.L. Co.			Southern Nat. Gas Co.			Tenn. Gas Trans. Co.			Texas East. Trans. Corp.		
1945	48	14	38	42	3 3/	55	72	11	16	-	-	-
1946	49	14	37	48	3 3/	49	61	12	27	-	-	-
1947	52	12	36	54	3 3/	43	66	15	19	79	-	21
1948	58	10	32	60	2 3/	38	65	12	23	79	-	21
1949	56	10	34	55	2 3/	43	65	12	23	76	-	24
1950	64	8	28	52	2 3/	46	61	16	23	64	10	26
1951	66	7	27	57	1 3/	42	67	14	19	72	7	21
1952	62	6	32	57	-	43	65	15	20	66	16	18
1953	58	6	36	70	-	30	66	13	21	65	16	19
1954	62	5	33	71	-	29	67	13	20	65	13	22
1955	63 2/	5	32	69 2/	-	31	65	13	22	65	12	23
1956	61 2/	5	34	56 2/	-	44	68	11	21	63	13	24
1957	58 2/	5	37	56 2/	-	44	65 2/	16	19	67 2/	13	20
1958	60 2/	4	36	62 2/	-	38	61 2/	16	23	66 2/	14	20
1959												
	Texas Gas Trans. Co.			Transco. Gas P. L. Corp.								
1945	-	-	-	-	-	-						
1946	-	-	-	-	-	-						
1947	31 4/	-	69 4/	-	-	-						
1948	77	-	23	-	-	-						
1949	76	-	24	71	13 5/	16						
1950	73	-	27	74	12 5/	14						
1951	62	10	28	71	12	17						
1952	69	7	24	70	11	19						
1953	67	7	26	68	11	21						
1954	59	13	28	68	11	21						
1955	62	11	27	65	16	19						
1956	60	11	29	69	13	18						
1957	64 2/	9	27	69 2/	12	19						
1958	62 2/	9	29	68 2/	13	19						
1959												

1/ For company only, 1948 to 1950 incl.; combined balance sheet of Colorado Interstate Gas Co. and Canadian River Gas Co. for 1951.

2/ Includes Reserve for Deferred Federal Income Tax.

3/ Preferred stock represents minority interest in the subsidiaries.

4/ Giving effect as of 12-31-47 to the transactions which were consummated in the merger of 3-31-48.

5/ 6% Interim Notes due and payable 5-1-51 in preferred stock.

Source: Moody's Public Utility Manuals and Supplements

(2314)

CAPITAL RATIOS OF MAJOR NATURAL GAS PIPELINE COMPANIES 1/

1945 To Date

	Long-Term Debt	Preferred Stock	Common Equity
1945	39.7	4.9	55.4
1946	40.5	4.9	54.6
1947	52.0	4.7	43.3
1948	55.7	3.4	40.9
1949	59.3	3.5	37.2
1950	60.0	4.9	35.2
1951	62.4	5.7	31.9
1952	62.0	7.1	30.9
1953	61.7	7.3	31.0
1954	61.6	7.7	30.7
1955	60.2	7.8	32.0
1956	59.6	8.4	32.0
1957	61.6	8.7	29.7
1958	60.9	9.5	29.6

1/ Represented by 41 pipelines which include, in general, companies having transmission line mileage in excess of 250 miles and sales for resale in excess of 50 percent of total sales. Also included are certain natural gas storage companies and companies which although not meeting the foregoing criteria entirely, have the essential characteristics of pipeline companies.

Source: "Statistics of Natural Gas Companies" (FPC Publication)

EARNINGS-PRICE RATIO [illegible]

[illegible] - 1940 - 1957

	1940	1941	1942	1943	1944	1945	1946	1947	1948
January	10.7	11.6	13.7	12.4	11.6	9.4	6.6	7.6	9.1
February	9.9	12.3	13.7	11.4	11.3	9.1	7.2	7.8	9.6
March	11.0	12.4	15.0	11.6	10.6	9.4	6.8	8.3	9.2
April	10.7	13.6	14.1	11.3	10.7	9.1	6.7	8.4	8.7
May	10.4	13.1	14.2	10.5	10.6	9.3	6.6	9.2	8.2
June	11.3	12.7	14.3	10.6	11.6	8.7	6.9	9.2	8.4
July	13.3	11.5	15.7	10.3	10.7	8.9	7.1	8.9	8.5
August	13.3	11.5	15.1	10.3	10.3	8.8	7.6	9.4	8.4
September	13.0	11.5	14.8	10.1	12.1	8.7	8.1	9.2	8.7
October	12.3	11.9	14.6	10.1	10.0	8.0	8.0	8.9	8.6
November	11.9	14.2	13.8	10.6	10.3	7.8	8.1	9.0	9.8
December	11.9	15.6	13.5	10.6	10.9	7.4	7.9	9.0	9.3
Straight Average	11.7	12.7	14.8	10.9	10.8	8.7	7.3	8.7	9.0

	1949	1950	1951	1952	1953	1954	1955	1956	1957
January	8.9	6.9	7.4	6.2	5.9	6.9	6.0	6.4	6.2
February	9.2	6.8	7.3	6.4	6.3	6.8	5.8	6.8	6.5
March	8.8	6.7	7.3	6.0	6.5	6.8	5.4	6.7	6.2
April	9.1	6.9	7.4	6.3	7.0	7.0	5.3	6.9	5.9
May	9.1	6.7	7.6	6.2	7.0	7.0	5.5	7.1	5.7
June	9.3	7.2	7.6	6.2	7.3	6.9	5.5	7.2	5.7
July	9.1	8.1	8.7	6.0	7.1	6.8	5.7	6.5	6.0
August	8.5	8.0	6.6	6.3	7.6	6.4	6.0	6.8	6.9
September	8.3	7.7	6.5	6.6	7.7	6.4	6.4	7.0	7.3
October	7.6	7.9	6.4	6.4	7.1	6.8	6.3	6.7	7.3
November	7.3	8.0	6.6	6.2	7.0	6.2	6.4	6.9	7.0
December	6.8	7.9	6.4	6.0	7.1	6.1	6.4	6.4	7.8
Straight Average	8.5	7.1	7.0	6.2	7.0	6.7	5.9	6.8	6.5

UNLISTED STOCKS - 1940 - 1957

	1940	1950	1951	1952	1953	1954	1955	1956	1957
January	7.6	6.3	7.8	7.8	7.1	6.4	6.0	6.2	7.1
February	7.1	6.0	8.0	7.8	6.9	6.5	5.8	6.8	6.9
March	7.3	6.0	8.4	7.3	6.5	6.9	6.0	6.7	6.9
April	7.0	6.3	8.9	7.1	6.8	6.6	5.9	7.3	6.5
May	7.5	6.4	10.0	6.8	6.9	6.6	6.0	7.7	6.7
June	8.8	7.4	10.0	7.4	7.3	6.8	5.8	7.5	7.0
July	8.5	9.0	9.5	7.3	8.9	6.7	5.8	7.0	6.8
August	8.3	8.7	8.7	6.8	6.6	6.6	5.9	7.2	7.4
September	7.5	8.1	8.8	7.9	7.0	6.3	5.8	7.7	7.8
October	7.7	7.9	9.1	8.0	6.9	6.5	5.8	7.5	8.7
November	7.0	8.7	9.9	7.0	6.8	6.8	5.7	7.7	8.8
December	6.4	8.3	8.3	6.8	6.7	6.4	6.0	7.5	9.1
Straight Average	7.6	7.4	8.9	7.3	6.8	6.6	5.9	7.2	7.5

Note: For the identities of the stocks represented in these calculations see the following page.

[illegible]

[illegible]

	1953	1954	1955	1956	1957	1958	1959	1960	1961
January	6.5	6.7	5.9	6.2	6.5	7.4	5.1	6.0	
February	6.6	6.8	5.8	6.7	6.5	7.6	5.2		
March	6.6	7.0	5.7	6.4	6.4	7.6	5.2		
April	6.	6.9	5.4	7.1	6.8	7.0	5.5		
May	6.6	6.9	5.6	7.5	5.6	6.4	5.5		
June	7.3	6.4	5.5	7.2	6.1	6.2	5.7		
July	7.0	6.8	5.7	6.6	6.2	6.1	5.4		
August	7.3	6.6	5.8	6.9	7.0	6.1	5.5		
September	7.5	6.4	6.0	7.2	7.4	6.0	6.0		
October	7.0	6.7	5.8	7.0	7.7	5.9	5.9		
November	7.0	6.4	5.9	7.2	7.7	5.7	6.0		
December	7.0	6.2	6.0	6.8	8.3	5.2	5.8		
Straight Average	7.0	6.7	5.7	6.9	6.8	6.4	5.6		

COMMON STOCKS INCLUDED IN EACH SERIES

Listed Series (1940 - 1957)	Unlisted Series (1949 - 1957)	New Series (1953 to date)
Consolidated Gas Utilities Co.	Colorado Interstate Gas Co. (Incl. since 1953)	Colorado Interstate Gas Co.
El Paso Natural Gas Company	Tennessee Gas Transmission Co.	El Paso Natural Gas Co.
Lone Star Gas Company	Texas Eastern Transmission Corp. (Incl. since March 1949)	Mississippi River Fuel Corp.
Mississippi River Fuel Corp. (Incl. since 1952)	Texas Gas Transmission Corp.	Northern Natural Gas Co.
Mountain Fuel Supply Company	Texas-Illinois Natural Gas Pipeline Co. (Incl. since 1954)	Panhandle Eastern Pipeline Co.
Northern Natural Gas Company	Transcontinental Gas Pipe Line Corp. (Incl. since 1953)	Southern Natural Gas Co.
Panhandle Eastern Pipe Line Co.		Tenn. Gas Transmission Co.
Southern Natural Gas Company		Texas Eastern Transmission Corp.
		Texas Gas Transmission Corp.
		Transcontinental Gas Pipe Line Corporation

Note:

The Earnings-Price Ratios (E-PR's) shown in these tables are composites calculated from the final market prices for the shares of each of the several companies as of the end of each month, and the latest statement of earnings per share on a "12 months ended" basis available as of that time.

For an example of the manner in which such composites are calculated see later pages of this study.

The Straight Average EPR for each year is the arithmetic average of the 12 monthly EPR's of that year.

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EARNINGS-PRICE RATIOS, YIELDS AND PAYOUTS ON
THE TEN PRINCIPAL NATURAL GAS PIPE LINE
COMPANY COMMON STOCKS

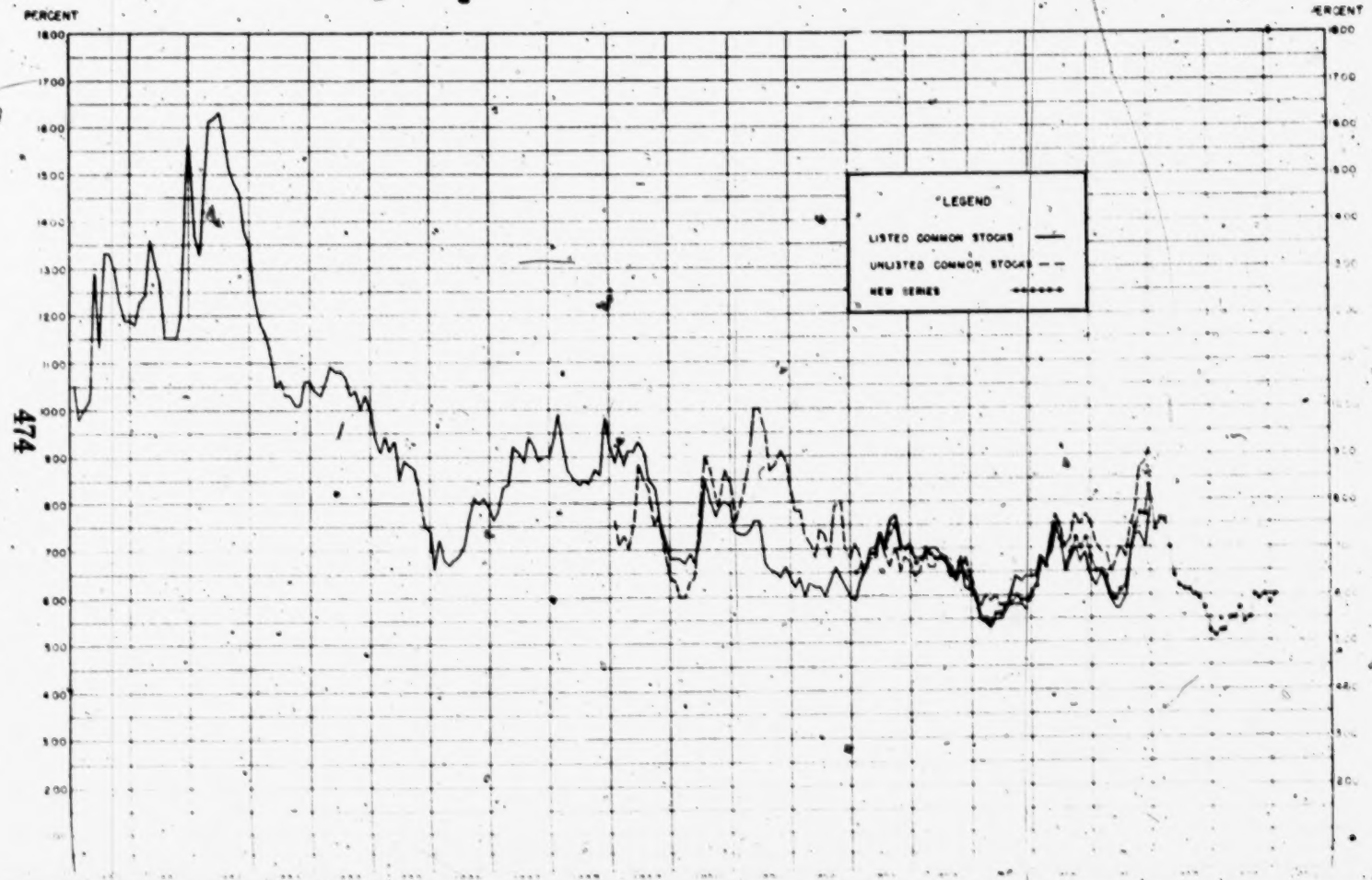
JANUARY 31, 1960

	No. Shares Outstanding (000)	Market Price Jan. 29 1960	Market Price Total (000)	Earnings 12 Mos. Ended 1959	Earnings Per Share	Earnings Total (000)	E/P Ratio	Dividend Rate	Yield	Pay Out
Colorado Int. Gas Co.	1,759	$47.75	$ 83,997	9-30	$2.88	$ 5,066	6.0	$1.25	2.6%	43.4
El Paso Natural Gas Co.	17,029	28.88	491,798	9-30	1.48	25,203	5.1	1.30	4.5	87.8
Miss. River Fuel Corp.	3,584	32.25	115,584	9-30	2.59	9,283	8.0	1.60	5.0	61.8
Northern Natural Gas Co.	8,265	27.88	230,428	9-30	1.85	15,290	6.6	1.40	5.0	75.7
Panhandle East. P.L. Co.	6,766	43.50	294,321	9-30	3.33	22,531	7.7	1.80	4.1	54.1
Southern Nat. Gas Co.	4,959	36.25	179,764	9-30	1.86	9,224	5.1	2.00	5.5	107.5
Tenn. Gas Transm. Co.	23,253	34.75	808,042	11-30	1.84	42,786	5.3	1.40	4.0	76.1
Texas East. Transm. Corp.	8,888	28.00	248,864	9-30	1.97	17,509	7.0	1.40	5.0	71.1
Texas Gas Transm. Corp.	2,950	30.75	90,713	9-30	2.25	6,638	7.3	1.40	4.6	62.2
Transco. Gas P. L. Corp.	11,950	21.13	252,504	9-30	1.25	14,938	5.9	1.00	4.7	80.0
Total			$2,796,010			$168,468				

Composite ratio $\frac{168,468}{2,796,010} \times 100 = 6.0$

Source: Standard & Poor's Stock Guide - February 1960

EARNINGS - PRICE RATIOS - LISTED AND UNLISTED NATURAL GAS COMPANY COMMON STOCKS



(2318)

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(2319)

Hearing Exhibit No. 22
Filed with Exrs. Certification
dated JUN 23 1960

EXHIBIT NO. _____
DOCKET NO. G-19983
WITNESS F. I. Shaffer

Return Earned on Average Book Value of the Common Shares

10 Natural Gas Pipe Line Companies

Company	1951	1952	1953	1954	1955	1956	1957	1958
Colorado Interstate Gas Co.	- %	11.0%	10.4%	9.8%	9.8%	10.3%	12.9%	12.8%
El Paso Natural Gas Co.	19.8	16.1	16.3	7.9	12.2	15.3	11.6	11.7
Mississippi River Fuel Corp.	14.5	15.0	12.5	13.5	14.8	15.9	13.1	12.5
Northern Natural Gas Co.	11.6	12.0	8.8	10.2	10.8	11.6	11.7	9.5
Panhandle Eastern Pipe-line Co.	19.1	28.5	24.2	19.5	22.6	22.8	20.3	18.6
Southern Natural Gas Co.	17.5	14.7	15.3	14.1	15.8	13.0	11.2	10.8
Tennessee Gas Transmis-sion Co.	14.4	17.6	13.9	13.5	16.5	16.2	16.2	15.5
Texas Eastern Transmis-sion Corp.	16.1	9.7	11.1	12.9	14.1	12.4	14.7	13.2
Texas Gas Transmission Corp.	15.9	9.3	12.8	12.7	12.8	15.1	11.4	11.4
Transcontinental Gas Pipeline Corp.	13.5	9.9	13.3	15.0	16.7	17.4	16.7	14.4
AVERAGE - All Ten Companies	15.8%	14.4%	13.9%	12.9%	14.6%	15.0%	14.0%	13.0%
AVERAGE - Excluding Tennessee Gas Transmis-sion Co.	16.0	14.0	13.9	12.8	14.4	14.9	13.8	12.8

FEDERAL POWER COMMISSION
Docket No. G19983
Hearing Ex. No. 22
Date Identified APR 7 1960
Date Admitted APR 11 1960

(2320)

Hearing Exhibit No. 23

Filed with Exrs. Certification dated JUN 23 1960

EXHIBIT NO. 23
DOCKET NO. G-19983
WITNESS FEDERAL POWER COMMISSION

G19983

Docket No. _____
Hearing Ex. No. 23
Date Identified APR 7 1960
Date Admitted APR _____

TENNESSEE GAS TRANSMISSION COMPANY
EARNINGS - PRICE RATIOS
1950 - 1959

	1950	1951	1952	1953	1954
January	6.0	6.2	6.3	7.4	6.9
February	5.2	6.7	6.3	7.3	6.9
March	5.3	7.2	5.6	7.4	7.2
April	5.5	7.4	5.5	8.1	6.9
May	5.5	8.4	5.7	7.8	6.4
June	6.5	8.7	6.5	8.5	6.8
July	7.3	8.0	6.6	7.9	6.8
August	7.3	7.4	5.8	7.3	6.8
September	6.1	7.4	6.6	7.8	6.2
October	6.3	8.0	6.6	7.3	6.5
November	8.0	7.2	6.5	7.3	6.5
December	6.8	6.5	6.2	7.3	6.0
Average	6.3	7.4 7.42	6.2	7.6	6.7

	1955	1956	1957	1958	1959
January	5.8	5.3	6.2	6.5	4.8
February	5.6	5.9	5.9	6.0	5.0
March	5.6	5.9	6.0	6.1	5.0
April	5.5	6.2	5.5	6.3	5.4
May	5.2	6.6	5.4	7.1	4.7
June	5.2	6.5	5.8	6.9	4.9
July	5.1	5.8	5.6	6.6	4.5
August	5.1	6.1	5.9	6.6	4.9
September	5.0	6.7	6.4	6.3	5.5
October	4.9	6.5	7.1	6.1	5.2
November	4.6	6.9	7.1	5.7	5.3
December	4.9	6.9	7.0	4.9	5.2
Average	5.2	6.3	6.2	6.4	5.0

Based on closing prices as of the end of each month and the latest available 12 months earnings as of that date.

Source: Standard & Poor's Stock Guide.

(6003)

Hearing Exhibit No. 25

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TENNESSEE GAS TRANSMISSION COMPANY

COMPARISON OF MINIMUM BILL REVENUES WITH TOTAL REVENUES FROM JURISDICTIONAL PIPELINE SALES AND TRANSPORTATION OF NATURAL GAS UNDER TARIFF RATE SCHEDULES

1. Total Revenues Under Tariff Rate Schedules	$289,093,834[1]
2. Revenue Under Minimum Bill Provisions of Tariff Rate Schedules	200,825,137[2]
3. Percent Minimum Bill Revenue is to Total Revenue	69.5%

[1] Data from Exh. 5, Schedule A, Column (7), line 7 plus line 17.

[2] Summary of minimum bill provisions of rate schedules contained in tariff is shown on Sheets 2 through 5 hereof. The rates utilized in the computation are the rates specified in the suspended tariff sheets except where otherwise indicated. The billing quantities utilized for sales under the CD, G and T rate schedules are based on billing demands shown in Statement G-2 of the rate increase application. The billing quantities utilized for sales under SO rate schedules are based on actual deliveries. The minimum bill under the SS-5 rate schedule is based only on billing demands and does not include a minimum commodity charge since such minimum commodity charge is included under the CD-5 rate schedules. Minimum bill under the T-2 rate schedule reflects only three months of service. Minimum bill under the PS-G rate schedule is based on contract quantity.

TENNESSEE GAS TRANSMISSION COMPANY

MINIMUM BILL PROVISIONS IN TARIFF RATE SCHEDULES FOR SALES AND TRANSPORTATION FROM PIPE LINE SYSTEM

RATE SCHEDULES CD-1, CD-2, CD-3, CD-4, CD-5 and CD-6
MINIMUM BILL:

The minimum monthly bill shall consist of the demand charge plus a minimum commodity charge consisting of a sum equal to 22.6¢ [1] multiplied by the number of days in said month, multiplied by 66-2/3% of the contracted demand; provided, however, that the minimum commodity charge shall not be applicable during those months for which Seller agrees in writing to such daily reductions below 66-2/3% of Buyer's contracted demand as can best be utilized by Seller, consistent with the most efficient and economic operation of its pipeline system, to make gas available for storage.

RATE SCHEDULES G-1, G-2, G-3, G-4, G-5 and G-6
MINIMUM BILL

The minimum monthly bill shall consist of the demand charge.

RATE SCHEDULES GS-1, GS-2, GS-3, GS-4, G-5 and GS-6
MINIMUM BILL—None

RATE SCHEDULES E-1, E-2, E-3, E-4, E-5 and E-6
MINIMUM BILL—None

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[1] 22.6¢ per Mcf in Zone 1
25.5¢ per Mcf in Zone 2
26.9¢ per Mcf in Zone 3
29.1¢ per Mcf in Zone 4
32.6¢ per Mcf in Zone 5
36.1¢ per Mcf in Zone 6

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RATE SCHEDULES R-1, R-2, R-3, R-4, R-5 and R-6
MINIMUM BILL—None

RATE SCHEDULES SR-1, SR-2, SR-3, SR-4, SR-5 and SR-6
MINIMUM BILL—None

RATE SCHEDULES SO-3, SO-4 and SO-5
MINIMUM BILL

For each month Buyer shall pay a minimum amount for service rendered under this Rate Schedule equal to 36.6¢[2] per Mcf multiplied by the aggregate daily volumes of gas tendered for delivery hereunder by Seller during such month, exclusive of any deficit gas, whether accepted for delivery by Buyer or not; provided, that in case where Buyer has a contracted demand contract with Seller, in the event that Buyer shall at any time reduce the quantity of gas taken by Buyer in Seller's Eastern Zone [3] Buyer shall have the right, during the time such reduction remains in effect, to refuse to take or pay for the percentage of the volume of gas tendered on any day by Seller to Buyer under this Rate Schedule which is obtained by dividing the amount of the daily reduction in the quantity of gas taken by Buyer in said Zone under said contracted demand contracts by the total of the contracted demands

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specified in said contracts for delivery in said Zone; provided, further, that in no event shall Buyer have the right

[2] 36.6¢ per Mcf in Rate Schedule SO-3
40.2¢ per Mcf in Rate ScheduleSO-4
45.4¢ per Mcf in Rate Schedule SO-5

[3] Applicable to Rate Schedule SO-3. For Rate Schedule SO-4 read Northern Zone and for Rate Schedule SO-5 read New York Zone.

to refuse to take or pay for more than 33-1/3% of the volume of gas tendered on any day by Seller to Buyer under this Rate Schedule. The volume so refused by Buyer shall be excluded from the computation of the minimum bill.

RATE SCHEDULE SS-5

MINIMUM BILL

The minimum monthly bill shall consist of the demand charge; provided, however, that the minimum annual bill shall consist of the sum of (a) twelve times the demand charge, and (b) a total commodity charge equal to 32.6¢ times the Winter Storage Quantity less 24.7¢ times the difference ebtween (1) the Winter Storage Quantity, and (2) the volume of storage service gas actually delivered to Buyer by Seller during the Wtihdrawal Period up to the Winter Storage Quantity. For the purpose of this minimum bill provision, the word "annual" shall mean the twelve-month period ending on October 31 each year and the Winter Storage Quantity shall be ninety times the Daily Storage Quantity without adjustment as provided in Section 5 hereof. Any payment due Seller on October 1 under this minimum bill provision shall be included in Seller's November billing to Buyer.

RATE SCHEDULE T-1

MINIMUM BILL

The monthly bill shall consist of the demand charge plus a minimum volume charge consisting of a sum equal to the aggregate

of 10.7¢ multiplied by the number of days in said month. multiplied by 66-2/3% of the specified maximum contract quantity.

RATE SCHEDULE T-2 [1]
MINIMUM BILL

The minimum monthly bill shall consist of the demand charge.

RATE SCHEDULE T-3 and T-4
MINIMUM BILL

The minimum monthly bill shall consist of the demand charge plus a minimum volume charge consisting of a sum equal to the aggregate of,

(1) 8.5¢ multiplied by the number of days in said month, multiplied by 66-2/3% of the specified contract quantity for said Eastern Rate Zone; plus

(2) 10.7¢ multiplied by the number of days in said month, multiplied by 66-2/3% of the specified contract quantity for said Northern Rate Zone.

RATE SCHEDULE PS-G [2]
MINIMUM BILL

The minimum bill shall be the product of the Peak Service Maximum Contract Quantity and $12.00. Any payment due Seller on April 30th under this minimum bill provision shall be included in Seller's billing to Buyer for deliveries during April.

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[1] As contained on First Revised Sheet No. 36 of Tennessee's FPC Gas Tariff, Fourth Revised Volume No. 2, in effect subject to refund in Docket No. G-11980.

[2] As contained on Original Sheet No. 120E of Tennessee's FPC Gas Tariff, Seventh Revised Volume No. 1. This rate schedule was cancelled as of April 30, 1959.

Hearing Exhibit No. 27

TENNESSEE GAS TRANSMISSION COMPANY

YIELDS ON PREFERRED STOCK ISSUES OF TENNESSEE GAS TRANSMISSION COMPANY

Number as Shown on Pages 16 & 17 of Exhibit 21	Issue	Month of Offering	Yield at Time of Offering	Yield on Moody's Medium Grade Preferred Stocks	Excess Over Moody's Yield
4	4.10%	Apr., 1948	3.86%	3.78%	.08
6	4.25	Sep., 1947	4.10	3.98	.12
8	4.65	Sep., 1949	4.49	4.32	.17
10	4.60	Apr., 1950	4.38	4.15	.23
12	4.64	Oct., 1950	4.50	4.20	.30
15	5.10	May, 1951	5.00	4.39	.61
19	5.25	May, 1952	5.25	4.33	.92
23	5.85	Sep., 1953	5.85	4.73	1.12
25	5.12	Mar., 1954	5.10	4.27	.83
30	4.90	June, 1955	4.90	4.20	.70

Hearing Exhibit No. 30

TENNESSEE GAS TRANSMISSION COMPANY

COMMON STOCK PRICES
PER CENT INCREASE FROM YEAR SHOWN TO DECEMBER, 1959
BASED UPON STANDARD & POOR'S INDEXES AS SET FORTH IN EXHIBIT 20

Line No.	Column 1 Particulars	(2) 1943	(3) 1944	(4) 1945	(5) 1946	(6) 1947	(7) 1948	(8) 1949	(9) 1950	(10) 1951	(11) 1952	(12) 1953	(13) 1954	(14) 1955	(15) 1956	(16) 1957	(17) 1958
1	6 Natural Gas Pipelines	411	421	297	185	186	142	133	110	78	41	39	27	16	10	(2)	(1)
2	425 Industrials	453	415	332	286	328	314	324	247	180	156	156	110	50	28	33	29
3	11 Natural Gas Distributors	308	272	187	122	139	135	115	94	81	71	70	50	33	25	23	8
4	25 Railroads	184	149	84	76	139	120	162	116	69	49	49	40	2	0	19	24
5	30 Electric Utilities	197	172	122	103	132	155	146	125	115	94	82	58	39	38	38	16
6	3 Telephone and Telegraph	74	61	48	40	64	75	83	73	67	67	65	52	40	40	40	31
7	Average	271	248	177	135	165	157	161	128	98	80	77	56	30	24	25	18
8	Rank of Natural Gas Pipelines	2	1	2	2	2	3	4	4	4	6	6	6	5	5	6	6
9	Rank of Electric Utilities	4	4	4	4	5	2	3	2	2	2	2	2	3	2	2	4
10	NOTE:																
11	( ) denotes decrease.																

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Hearing Exhibit No. 31

TENNESSEE GAS TRANSMISSION COMPANY

CAPITALIZATION—CONSOLIDATED

FEBRUARY 29, 1960

CAPITALIZATION

	Amount	Per Cent
Long-Term Debt	$ 737,664,739	56.84%
Preferred Stock	158,489,286	12.21
Common Equity (including 4.50% Convertible Preferred Stock)	401,707,519	30.95
Total capitalization	$1,297,861,544	100.00%

ALLOWANCE FOR STOCKHOLDERS' EQUITY

Long-term debt	56.84%	@	4.35%	= 2.47%
Preferred Stock	12.21	@	4.93	= .60
Common stock	30.95	@	Z	= ?
Overall Rate of Return				R

Allowed Return	Allowance for Stockholders' Equity
(R)	(Z)
5.75%	8.66%
6.00	9.47
6.25	10.27
6.50	11.08
6.75	11.89
7.00	12.70

TENNESSEE GAS TRANSMISSION COMPANY

RECONCILIATION OF CONSOLIDATED CAPITALIZATION
FEBRUARY 29, 1960

Line No.	Column 1 Particulars	(2) Debt	(3) Preferred Stock	(4) Common Equity	(5) Total Capitalization
1	PER CONSOLIDATED BALANCE SHEET	$754,355,739	$182,417,500	$383,175,773	$1,319,949,012
2	ADJUSTMENTS MADE BY STAFF:				
3	Issue expense on preferred stock	$ —	$ —	$ (5,024,000)	$ (5,024,000)
4	Issue expense on common stock (estimated)	—	—	(130,000)	(130,000)
5	Issue expense on preferred stock converted	—	—	(54,000)	(54,000)
6		$ —	$ —	$ (5,208,000)	$ (5,208,000)
7	PER STAFF EXHIBIT 24	$754,355,739	$182,417,500	$377,967,773	$1,314,741,012
8	ADJUSTMENTS MADE BY COMPANY:				
9	Reverse staff adjustments for issue expense	$ —	$ —	$ 5,208,000	$ 5,208,000
10	Deduct bank loans due within one year	(16,691,000)	—	—	(16,691,000)
11	Convert 4.50% second preferred	—	(19,264,600)	19,264,600	—
12	Deduct issue expense on common	—	(19,264,600)	19,264,600	—
13	Deduct issue expense on preferred (see note)	—	(4,326,014)	(107,486)	(107,486)
14	Deduct preferred due within one year	—	—	(625,368)	(4,951,382)
15		—	(337,600)	—	(337,600)
16	PER COMPANY EXHIBIT 31	$(16,691,000)	$(23,928,214)	$ 23,739,746	$ (16,879,468)
		$737,664,739	$158,489,286	$401,707,519	$1,297,861,544

17 NOTE:

(1) $625,368 is the balance of issue expense applicable to the 4.50% series convertible preferred stock which series has been included with common equity.

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Hearing Exhibit No. 32

TENNESSEE GAS TRANSMISSION COMPANY AND CONSOLIDATED SUBSIDIARIES
COST OF DEBT CAPITAL
AS OF FEBRUARY 29, 1960

Line No.	Column 1 Description	(2) Balance Outstanding Less Amounts Due Within One Year	(3) Rate	(4) Annual Cost
1	TENNESSEE GAS TRANSMISSION COMPANY:			
2	First Mortgage Pipe Line Bonds—			
3	2¾% series due 1966	$ 15,655,000	2.75%	$ 430,51[illegible]
4	3 % series due 1967	19,700,000	2.93	577,21[illegible]
5	3 % series due 1969	27,000,000	3.01	812,70[illegible]
6	3 % series due 1970	21,540,000	2.94	633,27[illegible]
7	3⅛% series due 1971	21,150,000	3.05	645,07[illegible]
8	3½% series due 1971	28,760,000	3.51	1,009,47[illegible]
9	3⅝% series due 1974	19,270,000	3.57	687,93[illegible]
10	3¾% series due 1974	13,800,000	3.82	527,16[illegible]
11	3½% series due 1975	100,410,000	3.49	3,504,30[illegible]
12	3⅞% series due 1976	41,000,000	3.92	1,607,20[illegible]
13	4¾% series due 1976	42,580,000	4.85	2,065,13[illegible]
14	5¼% series due 1977	44,700,000	5.43	2,427,21[illegible]
15	5⅝% series due 1979	48,000,000	5.54	2,659,20[illegible]
16	5¼% series due 1979	49,500,000	5.27	2,608,65[illegible]
17	Debentures—			
18	3⅞% due 1966	9,719,000	3.94	382,929
19	4¼% due 1974	51,265,000	4.23	2,168,51[illegible]
20	4 % due 1975	19,600,000	4.03	789,88[illegible]
21	4¼% due 1977	25,398,000	4.68	1,188,62[illegible]
22	6 % due 1977	22,500,000	6.33	1,424,25[illegible]
23	5% due 1978	27,680,000	5.20	1,439,36[illegible]
24	Note Payable—			
25	4⅜% due 1962	2,400,000	4.37	104,88[illegible]
26	Total Tennessee Gas Transmission Company	$651,627,000	4.25%	$27,693,48[illegible]

Line No.	Column 1 Description	(2) Balance Outstanding Less Amounts Due Within One Year	(3) Rate	(4) Annual Cost
27	EAST TENNESSEE NATURAL GAS COMPANY:			
28	First Mortgage Pipe Line Bonds—			
29	3½% series due 1969	$ 3,472,000	3.71%	$ 128,811
30	3⅝% series due 1969	3,720,000	3.92	145,824
31	4½% series due 1969	2,689,000	4.84	130,148
32	Convertible Debentures—			
33	5% due 1968	516,950	5.59	28,898
34	Long-Term Notes—			
35	5¾% due 1969	5,833,000	5.75	335,398
36	Total East Tennessee Natural Gas Company	$ 16,230,950	4.74%	$ 769,079
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37	THE CUMBERLAND CORPORATION:			
38	Bank Loans due 1964	$22,000,000	5.50%	$ 1,210,000
39	THE BAY PETROLEUM CORPORATION:			
40	Bank Loans due 1961	1,500,000	5.00	75,000
41	HARTOL PETROLEUM CORPORATION:			
42	Mortgage Notes—			
43	3¼% due 1962	141,000	3.25	4,583
44	4¼% due 1965	700,000	4.25	29,750
45	Other Notes	7,066	5.00	353
46	MIDWESTERN GAS TRANSMISSION COMPANY:			
47	Bank Loan due 1964	35,000,000	5.07	1,774,500
48	TENBARCO CORPORATION:			
49	Long-Term Notes due 1973	1,551,338	5.00	77,567
50	TENNESSEE PRODUCTION COMPANY			
51	Bank Loans—			
52	4¾% due 1974	1,235,004	4.75	58,663
53	5 % due 1974	3,577,500	5.00	178,875
54	TEN TEN TRAVIS CORPORATION:			
55	Long-Term Notes—			
56	4⅜%-4½% due 1976	2,025,000	4.38	88,695
57	5% due 1977	435,630	5.00	21,782
58	5⅜% due 1979	134,251	5.38	7,223
59	Bank Loan—			
60	5½% due 1961	1,500,000	5.50	82,500
61	Total Tennessee Gas Transmission Company			
62	and Consolidated Subsidiaries	$737,664,739	4.35%	$32,072,053

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TENNESSEE GAS TRANSMISSION COMPANY
COST OF PREFERRED STOCK CAPITAL
AS OF FEBRUARY 29, 1960

Line No.	Column 1 Description	(2) Balance Outstanding Less Amounts Due Within One Year	(3) Deduct: Issue Expense	(4) Net Balance	(5) Rate	(6) Annual Cost
1	FIRST PREFERRED STOCK:					
2	4.10% series	$ 7,400,000	$ 27,285	$ 7,372,715	3.96%	$ 284,5[illegible]
3	4.25% series	7,400,000	24,072	7,375,928	4.26	314,2[illegible]
4	4.60% series	8,750,000	49,198	8,700,802	4.51	392,4[illegible]
5	4.64% series	9,000,000	33,920	8,966,080	4.66	417,8[illegible]
6	4.65% series	8,750,000	40,820	8,709,180	4.67	406,[illegible]
7	4.90% series	20,000,000	695,411	19,304,589	5.18	999,[illegible]
8	5.10% series	9,000,000	357,406	8,642,594	5.25	453,7[illegible]
9	5.12% series	9,750,000	328,849	9,421,151	5.37	505,9[illegible]
10	5.25% series	9,250,000	369,766	8,880,234	5.50	488,4[illegible]
11	Total First Preferred Stock	$ 89,300,000	$1,926,727	$ 87,373,273	4.88%	$4,263,78[illegible]
12	SECOND PREFERRED STOCK:					
13	4.72% series	$ 43,997,500	$1,419,549	$ 42,577,951	4.88%	$2,077,80[illegible]
14	5.00% series	29,517,800	979,738	28,538,062	5.17	1,475,4[illegible]
15	Total Second, Preferred Exclusive of 4.50% Series	$ 73,515,300	$2,399,287	$ 71,116,013	5.00%	$3,553,2[illegible]
16	Total Preferred Stock Exclusive of 4.50% Series	$162,815,300	$4,326,014	$158,489,286	4.93%	$7,817,0[illegible]
17	4.50% series convertible second preferred stock	19,264,600	625,368	18,639,232	4.65	866,7[illegible]
18	Total Preferred Stock	$182,079,900	$4,951,382	$177,128,518	4.90%	$8,683,7[illegible]

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Hearing Exhibit No. 33

TENNESSEE GAS TRANSMISSION COMPANY
CAPITALIZATION—NONCONSOLIDATED
FEBRUARY 29, 1960

CAPITALIZATION

	Amount	Per Cent
Long-Term Debt	$ 651,627,000	54.91%
Preferred Stock	158,489,286	13.36
Common equity (including 4.50% convertible preferred stock	376,604,725	31.73
Total capitalization	$1,186,721,011	100.00%

ALLOWANCE FOR STOCKHOLDERS' EQUITY

Long-term debt	54.91%	@	4.25%	2.33%
Preferred stock	13.36	@	4.93	.66
Common stock	31.73	@	Z	Z
Overall Rate of Return				R

Allowed Return	Allowance for Stockholders' Equity
(R)	(Z)
5.75%	8.70%
6.00	9.49
6.25	10.27
6.50	11.06
6.75	11.85
7.00	12.64

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TENNESSEE GAS TRANSMISSION COMPANY
RECONCILIATION OF NONCONSOLIDATED CAPITALIZATION
FEBRUARY 29, 1960

Line No.	Column 1 Particulars	(2) Debt	(3) Preferred Stock	(4) Common Equity	(5) Total Capitalizatio
1	AMOUNT PER BALANCE SHEET	$668,318,000	$182,417,500	$358,072,979	$1,208,808,47
2	ADJUSTMENTS:				
3	Deduct bank loans due within one year	$(16,691,000)	$ —	$ —	$ (16,691,00
4	Convert 4.50% second preferred	—	(19,264,600)	19,264,600	—
5	Deduct issue expense on common	—	—	(107,486)	(107,48
6	Deduct issue expense on preferred (see note)	—	(4,326,014)	(625,368)	(4,951,38
7	Deduct preferred due within one year	—	(337,600)	—	(337,60
8	Total adjustments	$(16,691,000)	$(23,928,214)	$ 18,531,746	$ (22,087,46
9	AMOUNT PER EXHIBIT 33	$651,627,000	$158,489,286	$376,604,725	$1,186,721,01

10 NOTE:
$625,368 is the balance of issue expense applicable to the 4.50% series convertible preferred stock which series has been included with common equity.

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Hearing Exhibit No. 34

TENNESSEE GAS TRANSMISSION COMPANY
CAPITALIZATION—NONCONSOLIDATED
MARCH 31, 1960

CAPITALIZATION

	Amount	Per Cent
Long-Term Debt	$ 648,702,000	54.63%
Preferred Stock	158,489,286	13.34
Common Equity (including 4.50% Convertible Pfd. Stock)	380,329,705	32.03
Total Capitalization	$1,187,520,991	100.00%

ALLOWANCE FOR STOCKHOLDERS' EQUITY

Long-term debt	54.63%	@	4.26%	= 2.33%
Preferred stock	13.34	@	4.93	= .66
Stockholders equity	32.03	@	Z	= Y
Overall Rate of Return				R

Allowed Return	Allowance for Stockholders' Equity
(R)	(Z)
5.75%	8.62%
6.00	9.40
6.25	10.18
6.50	10.96
6.75	11.74
7.00	12.52

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TENNESSEE GAS TRANSMISSION COMPANY
RECONCILIATION OF NONCONSOLIDATED CAPITALIZATION
MARCH 31, 1960

Line No.	Column 1 Particulars	(2) Debt	(3) Preferred Stock	(4) Common Equity	(5) Total Capitalization
1	AMOUNT PER BALANCE SHEET	$664,783,000	$180,575,000	$363,603,943	$1,208,961,943
2	ADJUSTMENTS:				
3	Deduct bank loans due within one year	$(16,081,000	$ —	$ —	$ (16,081,000
4	Convert 4.50% second preferred	—	(17,463,700)	17,463,700	—
5	Deduct issue expense on common	—	—	(171,031)	(171,031
6	Deduct issue expense on preferred (see note)	—	(4,326,014)	(566,907)	(4,892,921
7	Deduct preferred due within one year	—	(296,000)	—	(296,000
8	Total adjustments	$(16,081,000	($22,085,714)	$ 16,725,762	(21,440,952
9	AMOUNT PER EXHIBIT 34	$648,702,000	$158,489,286	$380,329,705	$1,187,520,991

10 NOTE:
$566,907 is the balance of issue expense applicable to the 4.50% series convertible preferred stock which series has been included with common equity.

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Hearing Exhibit No. 35

TENNESSEE GAS TRANSMISSION COMPANY AND CONSOLIDATED COMPANIES AS OF MARCH 31, 1960

Line No.	Column 1 Description	(2) Balance Outstanding Less Amounts Due Within One Year	(3) Rate	(4) Annual Cost
1	TENNESSEE GAS TRANSMISSION COMPANY:			
2	First Mortgage Pipe Line Bonds—			
3	2¾% series due 1966	$ 14,335,000	2.75%	$ 394,213
4	3 % series due 1967	18,700,000	2.93	547,910
5	3 % series due 1969	27,000,000	3.01	812,700
6	3 % series due 1970	21,540,000	2.94	633,276
7	3⅛% series due 1971	21,150,000	3.05	645,075
8	3½% series due 1971	28,760,000	3.51	1,009,476
9	3⅝% series due 1974	19,270,000	3.57	687,939
10	3¾% series due 1974	13,800,000	3.82	527,160
11	3½% series due 1975	100,410,000	3.49	3,504,309
12	3⅞% series due 1976	41,000,000	3.92	1,607,200
13	4¾% series due 1976	42,580,000	4.85	2,065,130
14	5¼% series due 1977	44,700,000	5.43	2,427,210
15	5¾% series due 1979	48,000,000	5.54	2,659,200
16	5¼% series due 1979	49,500,000	5.27	2,608,650
17	Debentures—			
18	3⅞% due 1966	9,710,000	3.94	382,929
19	4¼% due 1974	51,265,000	4.23	2,168,510
20	4 % due 1975	18,995,000	4.03	765,499
21	4½% due 1977	25,398,000	4.68	1,188,626
22	6 % due 1977	22,500,000	6.33	1,424,250
23	5 % due 1978	27,680,000	5.20	1,439,360
24	Note Payable—			
25	4⅜% due 1962	2,400,000	4.37	104,880
26	Total Tennessee Gas Transmission Company	$648,702,000	4.26%	$27,603,502

(2355)

Line No.	Column 1 Description	(2) Balance Outstanding Less Amounts Due Within One Year	(3) Rate	(4) Annual Cost
27	EAST TENNESSEE NATURAL GAS COMPANY:			
28	First Mortgage Pipe Line Bonds—			
29	3½% series due 1969	$ 3,472,000	3.71%	$ 128,81
30	3⅞% series due 1969	3,720,000	3.92	145,82
31	4½% series due 1969	2,689,000	4.84	130,14
32	Convertible Debentures—			
33	5% due 1968	515,950	5.59	28,84
34	Long-Term Notes—			
35	5¾% due 1969	5,833,000	5.75	335,39
36	Total East Tennessee Natural Gas Company	$ 16,229,950	4.74%	$ 769,02

2356

37	THE CUMBERLAND CORPORATION:			
38	Bank Loans due 1964	$ 22,000,000	5.50%	$ 1,210,00
39	THE BAY PETROLEUM CORPORATION:			
40	Bank Loans due 1961	1,375,000	5.00	68,75
41	HARTOL PETROLEUM CORPORATION:			
42	Mortgage Notes—			
43	3¼% due 1962	141,000	3.25	4,58
44	4¼% due 1965	700,000	4.25	29,75
45	Other Notes	7,066	5.00	35
46	MIDWESTERN GAS TRANSMISSION COMPANY:			
47	Bank Loan due 1964	35,000,000	5.07	1,774,50
48	TENBARCO CORPORATION			
49	Long-Term Notes due 1973	1,519,672	5.00	75,98
50	TENNESSEE PRODUCTION COMPANY:			
51	Bank Loans—			
52	4¾% due 1974	1,211,255	4.75	57,53
53	5% due 1974	3,510,000	5.00	175,00
54	TEN TEN TRAVIS CORPORATION:			
55	Long-Term Notes—			
56	4⅜%-4½% due 1976	2,025,000	4.38	88,69
57	5% due 1977	133,917	5.38	7,20
58	5⅜%	434,830	5.00	21,74
59	Bank Loan—			
60	5½% due 1961	1,500,000	5.50	82,50
61	Total Tennessee Gas Transmission Company and Consolidated Subsidiaries	$734,489,690	4.35%	$31,969,62

2357

TENNESSEE GAS TRANSMISSION COMPANY
COST OF PREFERRED STOCK CAPITAL
AS OF MARCH 31, 1960

Line No.	Particulars	Column 1 (2) Balance Outstanding Less Amounts Due Within One Year	(3) Deduct Issue Expenses	(4) Net Balance	(5) Rate	(6) Annual Cost
1	FIRST PREFERRED STOCK:					
2	4.10% series	$ 7,400,000	$ 27,285	$ 7,372,715	3.86%	$ 284,587
3	4.25% series	7,400,000	24,072	7,375,928	4.26	314,215
4	4.60% series	8,750,000	49,198	8,700,802	4.51	392,406
5	4.64% series	9,000,000	33,920	8,966,080	4.66	417,819
6	4.65% series	8,750,000	40,820	8,709,180	4.67	406,719
7	4.90% series	20,000,000	695,411	19,304,589	5.18	999,978
8	5.10% series	9,000,000	357,405	8,642,595	5.25	453,736
9	5.12% series	9,750,000	328,850	9,421,150	5.37	505,916
10	5.25% series	9,250,000	369,766	8,880,234	5.50	488,413
15	Total First Preferred Stock	$ 89,300,000	$1,926,727	$87,373,273	4.88%	$4,263,789
12	SECOND PREFERRED STOCK:					
13	4.72% series	$ 43,997,500	$1,419,549	$42,577,951	4.88%	$2,077,804
14	5.00% series	29,517,800	979,738	28,538,062	5.17	1,475,418
15	Total Second Preferred Stock Exclusive of 4.50%	$ 73,515,300	$2,399,287	$71,116,013	5.00%	$3,553,222
16	Total Preferred Stock Exclusive of 4.50%	$162,815,300	$4,326,014	$158,489,286	4.93%	$7,817,011
17	4.50% series Second Preferred Stock	17,463,700	566,907	16,896,793	4.65	785,701
18	Total Preferred Stock	$180,279,000	$4,892,921	$175,386,079	4.91%	$8,602,712

Hearing Exhibit No. 36

COMMON STOCK PRICES
PERCENT INCREASE FROM YEAR SHOWN TO DECEMBER, 1959
BASED UPON STANDARD & POOR'S INDEXES AS SET FORTH IN EXHIBIT 20 AND MARKET PRICE OF TENNESSEE GAS TRANSMISSION COMPANY STOCK AS SET FORTH IN EXHIBIT 21, PAGE 29, COLUMN (h)

Line No.		Column 1 Particulars	(2) 1946	(3) 1947	(4) 1948	(5) 1949	(6) 1950	(7) 1951	(8) 1952	(9) 1953	(10) 1954	(11) 1955	(12) 1956	(13) 1957	(14) 1958
1		Tennessee Gas Transmission Company	700	625	375	238	176	169	132	134	107	44	39	35	11
2	6	Natural Gas Pipelines	185	186	142	133	110	78	41	39	27	16	10	(2)	(1)
3	425	Industrials	286	328	314	324	247	180	156	156	110	50	28	33	29
4	11	Natural Gas Distributors	122	139	135	115	94	81	71	70	50	33	25	23	8
5	25	Railroads	76	139	120	162	116	69	49	49	40	2	0	19	24
6	30	Electric Utilities	102	132	155	146	125	115	94	82	58	39	38	38	16
7	3	Telephone and Telegraph	40	64	75	83	73	67	67	65	52	40	40	40	31
8		Average	216	230	188	172	134	108	87	86	63	32	26	28	17
9		Rank of Tennessee Gas Transmission Company	1	1	1	2	2	2	2	2	2	2	2	3	5
10		Rank of Electric Utilities	4	5	3	4	3	3	3	3	3	4	3	2	4
11		NOTE:													
12		( ) denotes decrease.													

4383

Tennessee Data Supporting Revised Tariff, Filed October 5, 1959

STATEMENT OF NATURE, REASONS AND BASES FOR CHANGES IN TARIFF

The changes in rates filed herewith will provide additional revenues sufficient to compensate Tennessee Gas Transmission Company (Tennessee) for deficiencies in revenues in the amount of $27,129,624 based upon operations for the twelve months ended July 31, 1959, as adjusted. This deficiency in revenues is caused principally by increases in the cost of purchased gas, cost of capital and, to a somewhat lesser extent, by increases in taxes, and salary and wages. The changes in rates filed herewith relate to all jurisdictional pipeline sales and jurisdictional transportation of natural gas, and also to certain minor jurisdictional field sales. Pro forma adjustments in connection with this filing are limited to known changes in the cost of gas supply and other costs and to the correction for the lag in transferring property from construction work in progress to gas plant in service. The presently effective jurisdictional sales rates were established through Tennessee's filing of November 14, 1958 in Docket No. G-17166 which rates became effective under an undertaking on May 15, 1959. The presently effective jurisdictional transportation rates were established through Tennessee's filing of January 14, 1957 in Docket No. G-11980, which transportation rates became effective under an undertaking on July 14, 1957.

The attached statements have been prepared in accordance with the requirements of Part 154 of the Commission's Rules and Regulations. An explanation of the major adjustments made for increased costs and the methods used in determining the cost of service and revenue deficiency is set forth below:

4386

Rate of Return

A 7% rate of return on the average depreciated rate base has been included in the cost of service. See Statement F contained in this filing for a statement of Tennessee's position with respect to rate of return.

4407

(Received Oct. 8, '59)

Tennessee Gas Transmission Company Rate of Return Claimed

Tennessee claims 7% per annum to be a fair and reasonable rate of return at the present time. An amount for return at this rate on the average depreciated rate base has been included in the cost of service in this filing. Based on the twelve months ending July 31, 1959, a 7% rate of return, if earned, would yield earnings per share of common stock of $1.58 based upon the number of shares outstanding as of July 31, 1959.

Pursuant to the requirements of Section 154.63 of the Regulations of the Commission, Statement F-1 contained herein shows each class and series of long-term debt capital which was outstanding as of July 31, 1959, the end of the twelve months period of actual experience upon which this filing is based. As will be noted therein the cost of debt capital to Tennessee has increased from issue to issue with but few exceptions. As a result the historical cost of debt capital has reached the level of 4.22% per annum as of July 31, 1959. There is every indication that this cost of debt capital will continue to increase further in the foreseeable future.

On June 5, 1957 Tennessee issued $50 million principal amount of 5¼% series first mortgage bonds due in 1977

at a cost to the Company of 5.43% per annum. On July 31, 1957 Tennessee issued $25 million principal amount of 6% debentures which are due in 1977 on which the cost to the Company was 6.33% per annum. On April 23, 1958 Tennessee issued $30 million principal amount of 5% debentures due in 1978 at a cost to the Company of 5.20% per annum. On September 23, 1958 Tennessee issued $50 million principal amount of 5⅜% series first mortgage bonds due in 1979 on which the

cost to the Company was 5.54% per annum. On July 29, 1959 an additional $50 million principal amount of 5¼% series of first mortgage bonds due in 1979 were issued at an annual cost of 5.27% to the Company. On these relatively recent issues of debt the cost to the Company of the capital funds has ranged from 5.20% to 6.33%.

During the month of September, 1959 the yield on Moody's utility bonds rated A rose above 5% per annum for the first time since January, 1935, over 24 years ago. The yield on Moody's A-rated utility bonds as of September 17, 1959 was 5.05%. It should be noted that this average yield is on seasoned issues and is lower than cost of capital on specific new issues. For example, on September 17, 1959 the Georgia Power Company issued $18 million principal amount of 5¾% series first mortgage bonds on which the yield was 5.65% with a cost to the company of 5.77% per annum. This is an A-rated security, the same rating as applied to Tennessee's bonds. According to the Wall Street Journal of September 18, 1959, this borrowing is the costliest on a comparable issue of securities by this company since March, 1934. This cost of 5.77% is comparable to the cost of 5.15% for the $25 million issue of the same rating sold July 8, 1959 by Long Island Lighting Company. A clear indication of the increase in cost of

debt money is provided by the fact that United States Treasury securities are selling to yield about 5%.

New England Telephone and Telegraph Company on September 21, 1959 sold $45 million principal amount of double-A rated 35-year debentures on an interest cost basis of 5.72%. According to the Journal of September 22 this was the highest borrowing charge for a bond issue by any Bell System unit since November 5, 1923. Furthermore, electric power and telephone issues sell on a lower yield basis than gas transmission bonds.

4409

There is no indication that the trend in the cost of debt capital will be reversed at any time in the foreseeable future. Regardless of the continuing increase in the cost of new debt capital the historical cost of Tennessee's outstanding debt capital will continue to increase as the sinking fund operation retires the older, lower cost capital.

Statement F-4 submitted herewith sets forth what is sometimes called a "cost of capital" computation including 14.60% return on the book value of common equity capital. This statement is based on the ratio of capitalization actually outstanding as of July 31, 1959, with the cost of debt and preferred stock capital at the rates developed in Statements F-1 and F-2 included herewith. Statement F-1 and F-2 do not include any expenses incurred in refunding securities or call premiums which have been paid. However, it is Tennessee's position that such expenses should be considered in a proper determination of the cost of capital. It is also Tennessee's position that a fair rate of return should not and cannot be determined solely from the data disclosed by Statements F-1, F-2 and F-3.

The amount of common equity capital reflected in Statement F-4 has been pro formed to include the conversion of

the 4½% series of cumulative convertible second preferred stock. On this basis, common equity represents 26.86% of total capitalization. Substantial conversions of the 4½% series of second preferred stock into common shares have already occurred as evidenced by the fact that out of the $40 million principal amount originally issued, $12,150,300 was in the form of common stock as of July 31, 1959. Substantially all (94.4%) of this conversion occurred within the twelve months ending July 31, 1959.

4410

Tennessee realized approximately a 14.60% return on common equity capital in previous rate cases. Such an allowance is required to preserve Tennessee's financial integrity and to keep it in the financial position necessary to enable it to attract the capital needed by its natural gas business at reasonable rates in the present tight money situation. While such an allowance on book equity in previous rate cases resulted from a 6% overall return, at least a 7% return is now required to provide an equivalent allowance. Such a return would permit Tennessee to continue its long-established annual dividend of $1.40 per share of common stock. Accordingly, Tennessee respectfully submits that the 7% overall rate of return claimed in this filing is fair and reasonable.

• • • • •

4736

(Docketed Nov. 4, 1959)

UNITED STATES OF AMERICA
FEDERAL POWER COMMISSION

Docket No. G-19983

Before Commissioners: Jerome K. Kuykendall, Chairman; Frederick Stueck, William R. Connole and Arthur Kline.

In the Matter of
TENNESSEE GAS TRANSMISSION COMPANY

Order Suspending Proposed Tariff and Other Revised Tariff Sheets and Providing For Hearing

(Issued November 4, 1959)

Tennessee Gas Transmission Company (Tennessee) on October 5, 1959, pursuant to Section 4 of the Natural Gas Act and the Commission's Regulations thereunder, particularly Part 154 thereof [18 CFR Part 154], tendered for filing its FPC Gas Tariff Eighth Revised Volume No. 1, Second Revised Sheets Nos. 10, 11, and 25 and Fourth Revised Sheet No. 48 to its FPC Gas Tariff 4th Revised Volume No. 2, and First Revised Sheets Nos. 30, 51, 85, 105, 294, 305, 319, 341, 353, 517, 531, 536, 549, 551, 565, 567, 580, 598, 607, 613, 615, 650, 1012, 1038, 1040, 1054, 1056, 1072, 1074, 1081, 1083 and 1090. Second Revised Sheets Nos. 281 and 307 and Fourth Revised Sheets Nos. 268 and 279 to its FPC Gas Tariff Original Volume No. 3.

The tariff changes contained in the tendered filing effect a general increase in rates and charges for sale in interstate commerce of natural gas for ultimate public consumption subject to the jurisdiction of the Commission under the Natural Gas Act. Tennessee requests that the increased rates and charges be allowed to become effective as of November 5, 1959.

The tariff changes proposed by Tennessee involve increases for all of the services rendered over its transmission system, except surplus interruptible service and transportation service under its rate schedule T-2, and for 17 of its field sales, and amounts to an increase of $26,590,138 or 10.1% based on sales for the year ended July 31, 1959. The proposed increase is in addition to the increases now in effect subject to refund in Docket Nos. G-11980 and G-17166.

In support of its proposed increase, Tennessee states that it has filed to compensate for deficiencies in revenues arising principally from increases in the cost of purchased gas, cost of capital and to a limited extent by increases in taxes and salaries and wages. Tennessee also relies on a 7% rate of return and associated income taxes to support this proposed increase.

4737

The proposed rates in the tendered filing deviate substantially from allocated demand and commodity costs in that the amount of increased costs claimed for the most part has been added to the demand portion of the rate. In support of that deviation, Tennessee states that the new rates have been designed "to recoup the total cost of services allocated to each zone while at the same time maintaining the present level of commodity charges. This has been accomplished by determining the demand charge which, together with the present commodity charge will provide refund equal to the cost of service allocated to each zone."

The increased rates and charges proposed by Tennessee's revised tariff and other tariff sheets have not been shown to be justified and may be unjust, unreasonable, unduly discriminatory, or preferential, or otherwise unlawful.

The Commission finds:

It is necessary and proper in the public interest and to aid in the enforcement of the provisions of the Natural Gas Act that the Commission enter upon a hearing concerning the lawfulness of the rates, charges, classifications and services contained in Tennessee's FPC Gas Tariff Eighth Revised Volume No. 1 and its FPC Gas Tariff's Fourth Revised Volume No. 2, and Original Volume No. 3 as proposed to be amended by the revised tariff sheets identified above and that such tariff and revised tariff sheets be suspended and the use thereof deferred as hereinafter provided.

The Commission orders:

(A) Pursuant to the authority of the Natural Gas Act, particularly Sections 4 and 15 thereof, the Commission's Rules of Practice and Procedure and the Regulations under the Natural Gas Act (18 CFR Chap. I) a public hearing be held on December 15, 1959, at 10:00 a.m. (EST) in a hearing room of the Federal Power Commission, 441 G Street, N.W., Washington, D. C. concerning the lawfulness of the rates, charges, classifications, and services contained in Tennessee's FPC Gas Tariff Eighth Revised Volume No. 1; its FPC Gas Tariff Fourth Revised Volume No. 2 as proposed to be amended by Second Revised Sheets Nos. 10, 11 and 25 and Fourth Revised Sheet No. 48 and its FPC Gas Tariff Original Volume No. 3 as proposed to be revised by First Revised Sheets Nos. 30, 51, 85, 105, 294, 305, 319, 341, 353, 517, 531, 536, 549, 551, 565, 567, 580, 598, 607, 613, 615, 650, 1012, 1038, 1040, 1054, 1056, 1072, 1074, 1081, 1083, and 1090. Second Revised Sheets Nos. 281 and 307 and Fourth Revised Sheets Nos. 268, and 279.

(B) Pending such hearing and decision thereon, Tennessee's proposed FPC Gas Tariff Eighth Revised Volume

No. 1 and the other revised tariff sheets identified in paragraph (A) above hereby are suspended and their use deferred until April 5, 1960 and until such further time as they may be made effective in the manner prescribed by the Natural Gas Act.

(C) Interested State commissions may participate as provided by Sections 1.8 and 1.37 (f) of the Commission's Rules of Practice and Procedure [18 CFR 1.8 and 1.37 (f)].

By the Commission.

JOSEPH H. GUTRIDE,
Secretary.

5189

(Docketed Apr. 29, 1960)

UNITED STATES OF AMERICA
FEDERAL POWER COMMISSION

Docket No. G-19983

Before Commissioners: Jerome K. Kuykendall, Chairman; Frederick Stueck and Arthur Kline.

TENNESSEE GAS TRANSMISSION COMPANY

Order Making Effective Proposed Tariff Changes Upon Filing of Undertaking To Assure Refund of Excess Charges

(Issued April 29, 1960)

Tennessee Gas Transmission Company (Tennessee) on October 5, 1959, tendered for filing its FPC Gas Tariff, Eighth Revised Volume No. 1, Second Revised Sheets Nos. 10, 11 and 25 and Fourth Revised Sheet No. 48 to its FPC Gas Tariff, Fourth Revised Volume No. 2, and First Revised Sheets Nos. 30, 51, 85, 105, 294, 305, 319, 341, 353, 517, 531; 536, 549, 551, 565, 567, 580, 598, 607, 613, 615, 650, 1012, 1038, 1040, 1054, 1056, 1072, 1074, 1081, and 1090,

Second Revised Sheets Nos. 281 and 307, and Fourth Revised Sheets Nos. 268 and 279 to its FPC Gas Tariff, Original Volume No. 3, proposed to become effective November 5, 1959. Pursuant to the authority contained in the Natural Gas Act, particularly Sections 4 and 15 thereof, the Commission, by order issued November 4, 1959, provided for a hearing concerning the lawfulness of the proposed rates, charges, classifications and services contained in Tennessee's FPC Gas Tariffs as proposed to be changed by the above-designated tariff and tariff sheets, and pending such hearing and decision thereon, suspended and deferred the use of the proposed tariff and tariff sheets until April 5, 1960, and until such further time thereafter as they might be made effective in the manner prescribed by the Natural Gas Act.

On January 15, 1960, pursuant to Commission order issued December 16, 1959, in Docket No. G-18877, *et al.*, Tennessee tendered for filing First Revised Sheets Nos. 62, 63, 64, 65 and 66 to its FPC Gas Tariff, Eighth Revised Volume No. 1. By Commission order issued February 12, 1960, the hearing ordered in Docket No. G-19983 was also to concern the lawfulness of the rates, charges classifications and services contained in First Revised Sheets Nos. 62, 63, 64, 65 and 66 to Tennessee's FPC Gas Tariff, Eighth Revised Volume No. 1, and the use of these proposed tariff sheets was likewise, suspended until April 5, 1960, and until such further time as they might be made effective in the manner prescribed by the Natural Gas Act.

5190

The proposed tariff changes provide for increased rates and charges for sales in interstate commerce of natural gas for resale for ultimate public consumption, subject to the jurisdiction of the Commission, over and above the rates and charges being collected subject to refund in

Docket No. G-11980, from July 14, 1957 to May 15, 1959, and in Docket No. G-17166 since May 15, 1959.

This proceeding has not been concluded, nor a decision herein rendered.

On March 9, 1960, Tennessee, in accordance with the provisions of the Natural Gas Act, particularly Section 4 (e) thereof, filed a motion in this proceeding requesting that the proposed tariff and tariff changes identified above be made effective as of April 5, 1960.

The Commission finds:

It is appropriate and necessary in carrying out the provisions of the Natural Gas Act to require Tennessee to file an undertaking as hereinafter ordered and conditioned.

The Commission orders:

(A) Upon execution by Tennessee of the agreement and undertaking described in paragraph (C) below and acceptance thereof, evidenced by a letter addressed to Tennessee by the Secretary of the Commission, the rates, charges, classifications and services set forth in Tennessee's FPC Gas Tariff, Eighth Revised Volume No. 1 and First Revised Sheets Nos. 62, 63, 64, 65 and 66 thereto, Second Revised Sheets Nos. 10, 11 and 25 and Fourth Revised Sheet No. 48 to Tennessee's FPC Gas Tariff, Fourth Revised Volume No. 2, and First Revised Sheets Nos. 30, 51, 85, 105, 294, 305, 319, 341, 353, 517, 531, 536, 549, 551, 565, 567, 580, 598, 607, 613, 615, 650, 1012, 1038, 1040, 1054, 1956, 1072, 1074, 1081, 1083, and 1090, Second Revised Sheet Nos. 281 and 307, and Fourth Revised Sheets Nos. 268, and 279 to Tennessee's FPC Gas Tariff, Original Volume No. 3, shall be effective as of April 5, 1960, subject to further orders of the Commission in this proceeding.

(B) Tennessee shall refund at such times and in such manner as may be required by final order of the Commis-

sion, the portion of the increased rates found by the Commission in this proceeding not justified, together with interest thereon at the rate of 7 percent per annum from the date of payment to Tennessee until refunded; shall bear all costs of any such refunding; shall keep accurate accounts in detail of all amounts received by reason of the increased rates or charges effective as of April 5, 1960, for each billing period, specifying by whom and in whose behalf such amounts were paid; and shall report (original and one copy), in writing and under oath to the Commission monthly, for each billing period, and for each purchaser,

the billing determinants of natural gas sales to such purchaser and the revenues resulting therefrom, as computed under the rates in effect immediately prior to July 14, 1957, until Commission determination of the rates and charges in Docket Nos. G-11980, and G-17166, then under each of those rates, and under the rates allowed by this order to become effective, together with the differences in the revenues so computed.

(C) As a condition of this order, within 15 days from the date of issuance hereof, Tennessee shall execute and file with the Secretary of this Commission its written agreement and undertaking to comply with the terms of paragraph (B) hereof, signed by a responsible officer of the corporation, evidenced by proper authority from the Board of Directors, and accompanied by a certificate showing service of copies thereof upon all purchasers under the rate schedule involved, as follows:

Agreement and Undertaking of Tennessee Gas Transmission Company to Comply With the Terms and Conditions of Paragraph (B) of Federal Power Com-

mission's Order Making Effective Proposed Tariff Changes.

In conformity with the requirements of the order issued , 1960, in Docket No. G-19983, Tennessee Gas Transmission Company hereby agrees and undertakes to comply with the terms and conditions of paragraph (B) of said order, and has caused this agreement and undertaking to be executed and sealed in its name by its officers, thereupon duly authorized in accordance with the terms of the resolution of its Board of Directors, a certified copy of which is appended hereto this day of 1960.

TENNESSEE GAS
TRANSMISSION COMPANY
By .....

Attest:
Secretary

5192

(D) If Tennessee shall, in conformity with the terms and conditions of paragraph (B) of this order, make the refunds as may be required by order of the Commission, the undertaking shall be discharged, otherwise it shall remain in full force and effect.

By the Commission.

JOSEPH H. GUTRIDE,
Secretary.

5202

TENNNESSEE GAS TRANSMISSION COMPANY
P. O. Box 2511
Tennessee Building
Capitol 3-4841
Houston, Texas

May 4, 1960

(Received May 6, 1960

Federal Power Commission
Washington 25, D. C.

RE: TENNESSEE GAS TRANSMISSION COMPANY

Docket No. G-19983

Attention: Mr. Joseph H. Gutride, Secretary

Agreement and Undertaking of Tennessee Gas Transmission Company to Comply with Terms and Conditions of Paragraph (B) of Federal Power Commission's Order Making Effective Proposed Tariff Changes.

In conformity with the requirements of the order issued April 29,. 1960, in Docket No. G-19983, Tennessee Gas Transmission Company hereby agrees and undertakes to comply with the terms and conditions of Paragraph (B) of said order, and has caused this agreement and undertaking to be executed and sealed in its name by its officers, thereupon duly authorized in accordance with the terms of the resolution of its Board of Directors, a certified copy of which is appended hereto this 4th day of May, 1960.

A copy of this agreement and undertaking together with the attached resolution of the Board of Directors is being served today by mail upon all purchasers under rate

schedules involved in the above docket as evidenced by the attached certificate of service.

TENNESSEE GAS TRANSMISSION COMPANY
By R. L. McVEY
Senior Vice President

Attest:
Assistant Secretary

5203

(Received May 6, 1960)

I, L. R. Spence, do hereby certify that I am the duly elected, qualified and acting Assistant Secretary of Tennessee Gas Transmission Company, a Delaware corporation, and that as such, have custody of the corporate records and seal of said Company; that attached hereto are true and correct copies of certain resolutions duly adopted at a meeting of the Board of Directors of said Company held in Houston, Texas on March 16, 1960, as the same appear in the minute book of said Company; that these resolutions remain in full force and effect as of the date hereof and have not been amended, repealed, rescinded or changed in any way whatsoever.

In Witness Whereof, I have hereunto set my hand and affixed the corporate seal of said Tennessee Gas Transmission Company, this 4th day of May, A. D. 1960.

(Corporate Seal)

L. R. SPENCE
Assistant Secretary

5204

WHEREAS, Tennessee Gas Transmission Company has made application in Docket No. G-19983 to the Federal Power Commission for an increase in the rates for gas sold and the Commission has suspended until April 5, 1960, the effectiveness of such increase, and the Company has filed a motion with the Commission to place such increased rates in effect as of April 5, 1960, subject to the refund by the Company of such portion of such increase, if any, as may ultimately be determined by the Commission not to be just and reasonable.

NOW, THEREFORE, BE IT AND IT HEREBY IS

RESOLVED, that the President or a Vice President and the Secretary or an Assistant Secretary of this Company be and they hereby are authorized, empowered and directed, for and on behalf of this Company, to file with the Federal Power Commission an acceptance of an order of the Commission in Docket No. G-19983 permitting such increased rates to become effective and obligating the Company to refund to customers all or the portion, if any, of the difference between the increased rates and charges placed in effect as of April 5, 1960, and those in effect immediately prior thereto, as may ultimately be determined by the Commission to be not just and reasonable, together with interest thereon at the rate of 7% per annum; and in that connection, the Company shall bear all cost of any such refund and shall keep and maintain accurate accounts of the amounts received by reason of such increased rates, and make such reports thereon to the Commission from time to time as may be required and such officers are further authorized to accept for and on behalf of this Company such further terms and conditions contained in any such order as may in their opinion be deemed reasonable and appropriate.

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(Docketed June 17, 1960)

UNITED STATES OF AMERICA
FEDERAL POWER COMMISSION

Before Commissioners: Jerome K. Kuykendall, Chairman; Frederick Stueck, William R. Connole and Arthur Kline.

Docket No. G-19983

TENNESSEE GAS TRANSMISSION COMPANY

Order Adopting Interim Order Procedure Omitting Intermediate Decision and Fixing Date For Oral Argument

(Issued June 17, 1960)

The Presiding Examiner on May 27, 1960, reported to the Commission two motions entered orally upon the record by Staff counsel during the hearing on May 25, 1960. Those motions request (1) that the fair rate of return for Tennessee Gas Transmission Company (Tennessee) be determined on an interim order procedure, and (2) that the intermediate decision procedure be waived in accordance with Section 1.30 of the Commission's Rules of Practice and Procedure and that the record on rate of return be certified to the Commission for direct decision on this issue. There was no objection to the latter motion.

It is the contemplation of the first motion that Tennessee will be required to make immediate refund of excess revenues and to reduce its rates if it is determined under the intermediate order procedure that the fair rate of return for Tennessee is less than the 7 percent rate of return requested by it in this docket. It is further contemplated that for purposes of refund and reduced rates, all other factors relating to rate base, cost of service, allocations, etc., will be used as presented by Tennessee on the

record, without prejudice to the rights of any party to question any of those items in subsequent phases of this proceeding, if such item is determined to be in issue by the Presiding Examiner.

The stated objective of Staff's proposals is to alleviate as soon as possible some of the financial burden of increased rates being borne by Tennessee's wholesale customers.

Several parties to the proceeding filed memoranda on the above motions. Generally stated, those memoranda do not object to the interim order procedure determining a fair rate of return for Tennessee nor omission of the intermediate decision procedure. Some of the parties, however, do object to that part of the motion which requests that upon determination of the fair rate of return, Tennessee be directed to make immediate refunds and rate reductions. Those objections are based on the fact that there has been no decision on the issue of allocation of costs

to zones on Tennessee's system. The parties contend that absent a determination of that issue, an interim order prescribing refunds and reduction in rates would be both unlawful and inequitable in that it might prevent Tennessee from recovering its entire cost of service, or deprive customers in certain zones of the amount of refund dollars they contend they would receive if the zone allocation methods they are sponsoring are determined to be proper for Tennessee.

The issue of allocation of costs to zones has been fully heard in Docket No. G-11980 and is now before the Presiding Examiner in that docket for decision. The parties hereto also contend that an interim order prescribing refunds and rate reduction will constitute prejudgment of

that issue even though such interim order used the zone allocation method presented by Tennessee only *arguendo* and without prejudice to final determination of that issue.

In view of the importance of the matters referred to above, and as requested by Tennessee, it would appear appropriate that opportunity to present oral argument be afforded to the parties, in addition to filing briefs on the issue of the proper rate of return for Tennessee, as hereinafter provided.

The Commission finds:

(1) It is appropriate in carrying out the provisions of the Natural Gas Act that the proper rate of return for Tennessee be determined under an interim order procedure.

(2) The Staff's motion for waiver of the intermediate decision on the rate of return issue should be granted, and the parties should be allowed to file briefs and present oral argument, as hereinafter provided.

The Commission orders:

(A) The intermediate decision procedure hereby is omitted for purposes of determination of the proper rate of return for Tennessee.

(B) The Presiding Examiner is directed to certify to us the evidence of record on the issue of rate of return for determination of that issue under interim order procedure.

(C) Main briefs on the issue of the proper rate of return for Tennessee shall be filed and served by all parties who desire to do so, on or before July 15, 1960.

(D) Oral argument before the Commission shall be held on July 21, 1960 at 10:00 a.m. in a Hearing Room of the

Federal Power Commission, 441 G Street, N.W., Washington, D. C. (1) in lieu of reply briefs on the issue of the proper rate of return for Tennessee; and (2) on the questions whether as a result of determination of the proper rate of return, immediate refunds and rate deductions, if any, should be ordered, and if so, on what basis.

(E) All parties to this proceeding who desire to participate in the oral argument herein provided, shall notify the Secretary on or before July 11, 1960, of their intent to do so, indicating which items referred to in paragraph (D) above, they propose to argue and the amount of time they desire for such argument.

By the Commission.

JOSEPH H. GUTRIDE,
Secretary.

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(Docketed July 1, 1960)

UNITED STATES OF AMERICA
FEDERAL POWER COMMISSION

Before Commissioners: Jerome K. Kuykendall, Chairman; Frederick Stueck and Arthur Kline.

Docket Nos. G-11980, G-17166 and G-19983

TENNESSEE GAS TRANSMISSION COMPANY

Order Denying Motions

(Issued July 1, 1960)

On May 12, 1960, The Ohio Fuel Gas Company, The Manufacturers Light and Heat Company and United Fuel Gas Company (Columbia Companies), interveners in the above dockets, filed a joint motion requesting that we suspend the hearings in the proceeding in Docket No. G-19983

and relieve the Presiding Examiner of further duties until he is afforded an opportunity to issue an intermediate decision in Docket No. G-11980 on the allocation of costs to zones. In support thereof the Columbia Companies allege that the issues before the Presiding Examiner are substantial and require careful attention, and further, that if the allocation issue is decided many other issues in these dockets might be disposed of quickly by compromise and settlement.

It is our view that it would not be appropriate at this time to suspend the hearings in Docket No. G-19983. The Presiding Examiner is fully aware of the importance attached by the parties to the zone allocation issue and, without doubt, gave that matter full consideration in scheduling hearing sessions in Docket No. G-19983. We believe that the matter should be left to his discretion.

On May 23, 1960, the Consolidated Natural Gas System Companies[1] filed a motion in the proceeding in Docket No. G-11980 for an interim refund order therein. Generally stated, Consolidated requests that the Commission determine the rate of return and the depreciation rate issues in Docket No. G-11980 and that for purposes of determining refunds, both interim and ultimate, we apply the historical revenue level basis for allocation of costs to each of Tennessee's zones.

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Consolidated requests that we make these determinations on an interim basis, on the record as it stands in Docket No. G-11980, after reasonable opportunity for briefs and oral argument, and with the intermediate decision procedure omitted.

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[1] This group of interveners is comprised of The East Ohio Gas Company, Hope Natural Gas Company, Lake Shore Pipe Line Co., New York State Natural Gas Corporation and the Peoples Natural Gas Company.

Answers in opposition to that motion were filed by Tennessee, the Columbia Companies, and the New England Interveners[2] and in support thereof by the City of Cleveland, Ohio, and the City of Pittsburgh, Pennsylvania.

It is our belief that the procedure proposed by Consolidated which contemplates interim determination of these issues on a record which is not yet complete, and will require further determinations at a later date, will result in delay and duplication. While we agree that the burden of increased rates being borne by Tennessee's customers should be alleviated to the extent warranted, as expeditiously as possible, we conclude that the determination of issues should be made herein only when the record on such issues is complete.

Upon consideration of the motions referred to above, the responses thereto, and the status of the designated proceedings, we find and conclude that both of the said motions should be denied.

The Commission orders:

The motions filed in the above-designated proceedings by the Columbia Companies on May 12, 1960, and by Consolidated in the proceeding in Docket No. G-11980 on May 23, 1960, hereby are denied.

By the Commission.

JOSEPH H. GUTRIDE,
Secretary.

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[2] The 25 wholesale customers purchasing gas from Tennessee in the New England Zone.

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(Received July 19, 1960)

UNITED STATES OF AMERICA
BEFORE THE FEDERAL POWER COMMISSION

In the Matter of
TENNESSEE GAS TRANSMISSION COMPANY

Docket Nos. G-11980 and G-19983

Motion To Omit Intermediate Decision Procedure On Issue of Cost Allocation

In accordance with Section 1.30(c)(2) of the Commission's Rules of Practice and Procedure, Tennessee moves (1) for the omission of the intermediate decision on the issue of cost allocation now pending before the Presiding Examiner in Docket G-11980 and (2) that the issue of cost allocation be decided by the Commission simultaneously with the rate of return issue in Docket G-19983. In support hereof it is respectfully shown as follows:

I

The issue of cost allocation in Docket No. G-11980 has been thoroughly tried and briefed and is ripe for decision. The issue of rate of return in Docket G-19983 will be argued orally before the Commission on July 29, 1960 and will then also be ripe for decision.

II

Hearings on the issue of cost allocation were concluded on December 17, 1959. Reply briefs were filed on April 11, 1960. In view of

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this fact, Tennessee assumed that the Presiding Examiner's decision on this issue would be forthcoming in the

very near future. However, in the course of recent hearings in Docket G-19983, the Examiner observed that; due to the press of other matters, he has been unable to make any progress on his decision on the allocation issue. He estimated that his decision would not be forthcoming until about November 1960 (Tr. 2206).

III

In our Memorandum "In Opposition to Staff Motion for Interim Order," filed June 13, 1960 in Docket G-19983, we pointed out the importance of not requiring Tennessee to reduce rates on the basis of any interim order which might reduce Tennessee's claimed rate of return, until the issue of cost allocation was decided.

IV

In view of these facts and in view of the further fact that an early decision by the Commission on the issue of cost allocation may well serve to expedite the disposition of Tennessee's three pending rate cases (Dockets G-11980, G-17166 and G-19983), we respectfully urge the Commission to omit the intermediate decision procedure on the allocation issue and decide the allocation issue simultaneously with the rate of return issue in Docket G-19983. We are of the firm view that such procedure would serve the best interests of all concerned, and would also obviate the risks discussed in our aforementioned Memorandum "In Opposition to Staff Motion for Interim Order" which would result from any interim

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rate reduction order based only on the decision of the rate of return issue.

Respectfully submitted,

TENNESSEE GAS TRANSMISSION COMPANY
By /s/ HARRY S. LITTMAN
Its Attorney

William C. Braden, Jr.
B. J. Williamson
Tennessee Building
Houston 1, Texas

Harry S. Littman
Jack Werner
Harold L. Talisman
317 Wyatt Building
Washington 5, D. C.

Attorneys for Tennessee Gas Transmission Company

July 19, 1960.

* * * *

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(Docketed Aug. 5, 1960)

UNITED STATES OF AMERICA
FEDERAL POWER COMMISSION

Before Commissioners: Jerome K. Kuykendall, Chairman; Frederick Stueck, Arthur Kline and Paul A. Sweeney.

TENNESSEE GAS TRANSMISSION COMPANY

Docket Nos. G-11980 and G-19983

Order Denying Motions

(Issued August 5, 1960)

On July 19, 1960, Tennessee Gas Transmission Company (Tennessee) filed a motion requesting (1) omission

of the intermediate decision on the issue of cost allocation pending before the Presiding Examiner in Docket No. G-11980, and (2) decision on that issue by the Commission simultaneously with decision on the rate of return issue in Docket No. G-19983. In support of its motion Tennessee alleges that early decision by the Commission on the cost allocation issue may serve to expedite disposition of Tennessee's three pending rate cases and would obviate risks that might result from an interim rate reduction based only on the decision of the rate of return issue.

On July 29, 1960, The Ohio Fuel Gas Company, The Manufacturers Light and Heat Company and United Fuel Gas Company (Columbia Companies), interveners in the above dockets, filed a cross-motion and answer to Tennessee's motion, referred to above. Columbia Companies in their answer urge denial of Tennessee's request for omission of the intermediate decision procedure on the cost allocation issue in G-11980, and in their counter-motion request that hearings in Docket No. G-19983 be suspended and the Presiding Examiner be relieved of all other duties until he has issued his decision on the cost allocation issue.

Answer and objection to Tennessee's motion was filed by the New England Interveners, comprised of the 25 wholesale customers purchasing gas from Tennessee in its New England Zone.

Hearings on the cost allocation issue, severed from the other issues in Docket No. G-11980 by Commission order, were concluded on December 17, 1959, and briefing thereon was concluded on April 11, 1960. Tennessee's motion for omission of the intermediate decision on that issue is neither timely nor concurred in by the other parties to the proceeding. Further, while we recognize that an early decision on that issue is desirable, the nature and consider-

able size of the record, indicates that it would be more practicable in the

interests of an early decision and in the interest of effective administration of the Natural Gas Act, that the Presiding Examiner, who has available knowledge of that record, should proceed with consideration of the evidence and render decision thereon.

The cross-motion filed by the Columbia Companies is substantially the same motion filed by these parties on May 12, 1960 and denied by our order issued July 1, 1960 in these dockets. The so-called cross-motion sets forth no basis for reversal of that order. Moreover, the present schedule of further hearings in Docket No. G-19980 appears to achieve the effect sought by that counter-motion.

Upon consideration of the above motions and the respons thereto we find and conclude that both of those motions should be denied.

The Commission orders:

The motion filed by Tennessee on July 19, 1960 and the cross-motion filed by Columbia Companies on July 29, 1960, in these dockets, hereby are denied.

By the Commission.

MICHAEL J. FARRELL,
Acting Secretary.

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(Docketed Aug. 19, 1960)

UNITED STATES OF AMERICA
FEDERAL POWER COMMISSION

Before Commissioners: Jerome K. Kuykendall, Chairman; Frederick Stueck, Arthur Kline and Paul A. Sweeney.

TENNESSEE GAS TRANSMISSION COMPANY

Docket No. G-19983

Order Determining Rate of Return Disallowing Proposed Increased Rates and Directing Payment of Refunds and Permitting Substitution of Lower Interim Rates

(Issued August 9, 1960)

This proceeding arises from a filing on October 5, 1959, by Tennessee Gas Transmission Company (Tennessee) under Section 4(d) of the Natural Gas Act of proposed increased rates to its jurisdictional customers totaling $26,590,138 on an annual basis. These proposed increased rates were suspended by order of the Commission issued November 4, 1959, until April 5, 1960, and such further time as they might be made effective in the manner prescribed by Section 4(e) of the Act. Upon motion of Tennessee duly made, and by order of the Commission issued April 29, 1960, the proposed increased rates became effective as of April 5, 1960, subject to refund of any charges found by the Commission in this proceeding to be excessive.

Hearing on the lawfulness of Tennessee's proposed increased rates in this proceeding commenced on February 2, 1960. In the course of the hearing, Tennessee presented all of its direct evidence. This evidence was tested by cross-examination on the single issue of rate of return. Evidence on this single issue was also presented by the Commission's staff and by the West Virginia Public Serv-

ice Commission. This evidence was in turn the subject of cross-examination by Tennessee, and Tennessee thereafter presented rebuttal evidence on the issue of rate of return, the cross-examination of which was concluded on May 25, 1960. On that date Commission staff counsel moved that an interim order procedure be adopted with respect to the rate of return issue, requesting (1) that the Commission consider the record on rate of return and issue its order determining the fair, just and reasonable rate of return to be allowed Tennessee in this proceeding; and (2) that if the rate of return so determined is less than the 7 percent proposed by Tennessee, the Commission direct Tennessee to refund the difference between the rates collected at the proposed 7 percent and reduced rates giving effect to the rate of return so determined. Staff's motion contemplates that for the purpose of the immediate refund and the filing of substitute lower rates for the interim period, all other factors relating to rate base, cost of service, allocation, etc., be used as presented by Tennessee. Commission staff counsel also moved that the intermediate decision procedure be waived in accordance with Section 1.30 of the Commission's Rules of Practice and Procedure.

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By order issued June 17, 1960, the Commission omitted the intermediate decision procedure on the issue of rate of return and directed that oral argument before the Commission be heard on (1) the question of the proper rate of return for Tennessee and (2) the questions whether as a result of determination of the proper rate of return, immediate refunds and rate reductions, if any, should be ordered, and if so, on what basis. Oral argument by Tennessee, staff and interveners was heard on July 29, 1960, and these issues are now before the Commission for decision.

RATE OF RETURN

Tennessee proposes in this proceeding an overall rate of return on its net investment rate base of 7 percent. Staff, and those interveners who have taken a position on the rate of return issue, contend that this rate of return is not justified and that Tennessee has not shown the need for such a high rate of return. Staff's position is that the fair, just and proper rate of return for Tennessee is not in excess of 6⅛ percent, whereas those interveners who have addressed themselves to this issue take the position that Tennessee is entitled to no more than 6 percent, except for one intervener who would allow Tennessee 6¼ percent.

Based on the evidence of record, the parties' briefs, and the oral argument, we are of the opinion that 6⅛ percent is the fair, just and reasonable rate of return to be allowed Tennessee for the purpose of this interim order, and is in accord with the principles and standards set forth by the Supreme Court in *Bluefield Water Works and Improvement Co.* v. *Public Service Commission of West Virginia*, 262 U.S. 679, and in *F.P.C.* v. *Hope Natural Gas Co.*, 320 U.S. 591.

For the purpose of determining an overall rate of return, Tennessee utilizes capitalization ratios which purport to be based on the capital structure of Tennessee alone. Staff and the West Virginia Commission, on the other hand, presented their evidence and make their recommendations on the basis of Tennessee's consolidated capitalization. Use of a capitalization on a consolidated basis is also urged by certain of the interveners.

Tennessee, through its divisions and subsidiaries, is engaged in diversified activities, some of which are wholly unrelated to its gas transmission business. It carries on these activities both on this continent and overseas. Ten-

nessee's chairman testified in this proceeding that 30 percent of Tennessee's gross and net has come from unregulated activities. Tennessee's evidence shows a total capitalization on a consolidated basis of $1,297,861,544, as of February 29, 1960, as compared to a total capitalization on a non-consolidated basis, as of the same date, of $1,186,721,011. It further shows that of Tennessee's average net plant of $1,053,719,815, some 79 percent represents utility or gas plant, and some 21 percent represents non-utility plant. We note these data to show the extent to which Tennessee is engaged in activities

which are beyond the regulatory scope of this Commission, and to point up the problem with which we are faced in fixing rates to be paid by Tennessee's jurisdictional gas customers. The natural gas consumer should not be put in the position of either financing or underwriting Tennessee's non-jurisdictional business, and we are of the opinion that for the purpose of determining a proper rate of return to be allowed we should look to the capitalization of Tennessee's gas pipeline business rather than to either its consolidated capitalization or the capitalization of the company itself on a non-consolidated basis.

The record at the present time does not reveal what the capitalization of Tennessee's gas pipeline business might be. Tennessee has introduced in evidence what purports to be its capitalization on a non-consolidated basis, and we would be inclined to determine Tennessee's interim rate of return on that basis, but for the fact that the state of the record does not permit us to determine the completeness or accuracy of that statement in the absence of evidence showing the capital structure of the various subsidiaries of Tennessee. Thus, for the purpose of this interim order we shall utilize a capitalization determined on

a consolidated basis. It should be noted, however, that as a practical matter the rate of return which we herein determine to be proper would be the same whether we base our findings upon the consolidated capitalization set forth below, as we here do, or were to use as the basis of our findings the non-consolidated capitalization statement put in evidence by Tennessee. We emphasize, however, that the determination herein made is for the purpose of this interim order only and that such determination is subject to final review in the next phase of this proceeding in light of such additional evidence as shall be adduced upon resumption of the hearing to show Tennessee's capitalization insofar as it applies only to Tennessee's gas pipeline business. Tennessee, upon resumption of the hearing, shall present evidence for this purpose.

On a consolidated basis, we find Tennessee's capitalization, as of February 29, 1960, to be as follows:

Long term debt	$ 737,664,739	56.8
Preferred stock	177,782,266	13.7
Common equity	383,068,287	29.5
	$1,298,515,292	100.0%

In fixing these capitalization ratios, we have excluded from long term debt $18,494,427 of accumulated deferred taxes arising from the use of liberalized depreciation under Section 167 of the Internal Revenue Code of 1954, which staff contends is equivalent to a long term loan at zero interest. However, in so doing, we do not here decide the issue of the proper treatment of the deferred taxes, but rather reserve that question for disposition in the next phase of the proceeding, together with the question of the proper treatment of the tax benefits for statutory depletion and intangible well drilling costs.

We have treated the $19,264,600 of 4.50 percent convertible preferred stock, which as of February 29, 1960, had not been converted into equity, as preferred stock. We cannot agree with Tennessee that such stock should be reclassified in the capitalization as common equity. Although this stock is presently in the process of being converted, we cannot conclude that conversion of the balance outstanding is imminent. The $19,264,600 is therefore included in the amount of preferred stock shown in the above finding of capitalization. We have also included in the amount of preferred stock the premium received by Tennessee on five issues of preferred stock amounting to $653,748, which Tennessee concedes should be included and which does not appear to be included in the company's statement of consolidated capitalization.

There is no controversy concerning the average weighted cost of Tennessee's debt and preferred stock, and we accept the cost of 4.35 percent for debt and 4.90 percent for preferred stock as shown by Tennessee on a consolidated basis.

The heart of the controversy in this proceeding and the issue which is basic to a determination of the overall rate of return to be allowed Tennessee is the question of the allowance to be provided in the rate of return for Tennessee's common equity. This allowance takes into account the return which is required to attract equity capital into Tennessee's business. On the basis of the weighted average cost of debt capital and preferred stock of 4.35 percent and 4.90 percent respectively, and utilizing the capitalization ratios as determined above, the following

allowances on Tennessee's equity capital would be provided by allowing the overall rate of return as indicated:

Overall Return	Equity Allowance
6 percent	9.69 percent
6⅛ percent	10.12 percent
6¼ percent	10.54 percent
6½ percent	11.39 percent
6¾ percent	12.24 percent
7 percent	13.08 percent

In support of its proposed 7 percent rate of return, Tennessee contends that it has historically been allowed a return of 14-16 percent of its book equity, and that it now should be allowed the same return on book equity to maintain its relative position; that a 7 percent rate of return is necessary to maintain a proper coverage of its debt interest and preferred

dividends; and that Tennessee and other natural gas pipeline companies are entitled to a higher return on equity than electric companies which have historically received a return of close to 11 percent on a larger common equity base. Tennessee wholly rejects the use of earnings-price ratios as a measure of investor appraisal and as a guide to determinating the proper equity allowance, and relies instead on current earnings-book value ratios. Staff, on the other hand, utilizes earnings-price ratios as the best guide, to be considered with judgment and in balance with other factors, in determining the proper allowance for equity. The West Virginia Commission, in turn, derives an allowance for equity from a study of the dividends on Tennessee's common stock in relation to net proceeds, making appropriate adjustments for pay-out ratio and cost of issuance, etc.

We have only recently considered the question of the reliability of using earnings-price ratios in determining the proper allowance to be made for common equity in the rate of return for a natural gas pipeline company. In our order issued July 8, 1960, in *Southern Natural Gas Co.*, Docket No. G-20509, we confirmed the Commission's practice of using earnings-price ratios, with judgment, as an indication of a proper return on common equity. We stated:

> "The investor's appraisal of the risks inherent in the enterprise and the return which he requires in the light of this appraisal are basic to a determination of the allowance for common equity, and the Commission as a matter of practice has always looked to earnings-price ratios as an indication of such investor appraisal. We are of the opinion that the study of earnings-price ratios for Southern and comparable pipeline companies over a period of years, put in evidence in this proceeding by staff, may properly be used with judgment, together with other factors, in determining a reasonable allowance for Southern's equity."

The record in this proceeding shows that for the five year period, 1955-1959, the earnings-price ratios for Tennessee averaged 5.8 percent, and for the seven year period, 1953-1959, they averaged 6.2 percent. For ten major natural gas pipeline companies, comparable to Tennessee and including Tennessee, the earnings-price ratios for 1955-1959 averaged 6.3 percent, and for 1953-1959 they averaged 6.4 percent. Moreover, for the 12 year period, 1948-1959, for which such data is available for Tennessee, its earnings-price ratios averaged 6.6 percent and compare favorably with those of the other major pipeline companies, and are generally equal to or lower than those of the industry as a whole. Such data indicate that Tennessee enjoys a favorable and improving position in the money market in relation to the rest of the industry.

We should note at this point that the somewhat different approach to measuring investor appraisal of Tennessee's common stock which was utilized by the West Virginia Commission confirms and supports the

results of the earnings-price ratio study presented by staff. The evidence introduced on behalf of that commission indicates a "historical cost of equity capital" of 7.99 percent and a "current cost of equity capital" of 7.19 percent.

The record further shows that Tennessee has been able to maintain a high level of earnings while moving towards a more conservative equity ratio. It shows that there has been a substantial increase in the market price of its stock since 1946, reflecting the favorable position which its common stock enjoys in the market place. The record also shows that Tennessee has a relatively low risk in connection with the recovery of its cost of service by reasons of the minimum bill provisions of its rate schedules guaranteeing at least 69.5 percent of its estimated revenues from jurisdictional business. Tennessee's position is further strengthened by its rapidly increasing gas reserves, these reserves having increased 63 percent since 1950 as compared to an increase of 36 percent for the nation's reserves for the same period.

There is no sound basis for Tennessee's claim that it is entitled to the same return on book equity which it has historically enjoyed. To accept such a basis for the determination of a proper allowance for equity would be to deny recognition to changes in market prices, changes in dividend and earnings requirements of investors, changes in the relative risk of the natural gas industry as compared to other industries, and changes in relative risk of companies within the natural gas industry. This we cannot possibly do. We have, however, given consideration to the evidence

of the return on book equity of Tennessee as compared to the other major pipeline companies as a factor in fixing a return which is commensurate with returns on investments of other enterprises having corresponding risks, and such evidence confirms our conviction that Tennessee is entitled to no more than the return herein provided, and that its position in the industry will not be prejudiced by reason of the determination herein made of the proper rate of return.

In five previous rate proceedings before this Commission, the rate of return to Tennessee was not a matter of contest. In four of the cases there was agreement upon a rate of return of 6 percent, and the cases were settled without discussion of the rate of return or the allowance on common equity. In the fifth and last proceeding, Docket No. G-5259, the issue was heard and the examiner noted that the use of the proposed 6 percent rate of return would result in an allowance on common equity of 13.71 percent. He further noted that the staff had expressed some concern that the allowance on equity might be excessive, but had concluded that in view of the high interest rates then obtaining and the extremely thin common equity of Tennessee, a 6 percent rate of return should not be regarded as excessive. The examiner accepted the agreed upon 6 percent rate of return and his decision in that respect was adopted by the Commission (18 FPC 428). There is no substance in Tennessee's argument that the action of the Commission in accepting a 6 percent rate of return in the foregoing cases in some way gives it a vested right in the return on equity resulting therefrom. And it is clear from the evidence in this proceeding that the high return on equity which Tennessee here seek is not justified.

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Again there is no sound basis for Tennessee's position with respect to the coverage ratio for interest on debt and dividends on preferred stock. There is no substantial evi-